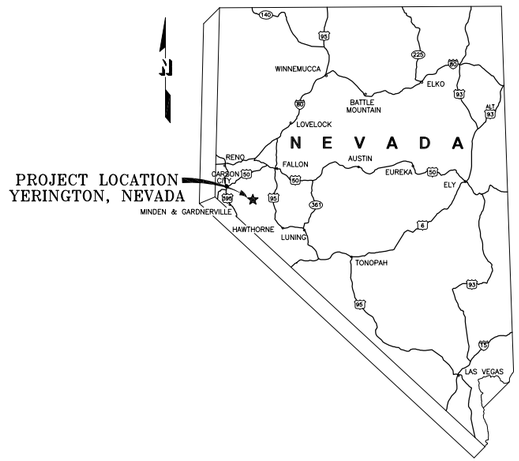
**Appendix C**

**Plan Drawings**

**(Compact Disc, Portable Document Format)**

# ATLANTIC RICHFIELD COMPANY

# REMOVAL ACTION IMPLEMENTATION PLAN
# FOR THUMB POND AND SUB-AREA A
# JUNE 2010

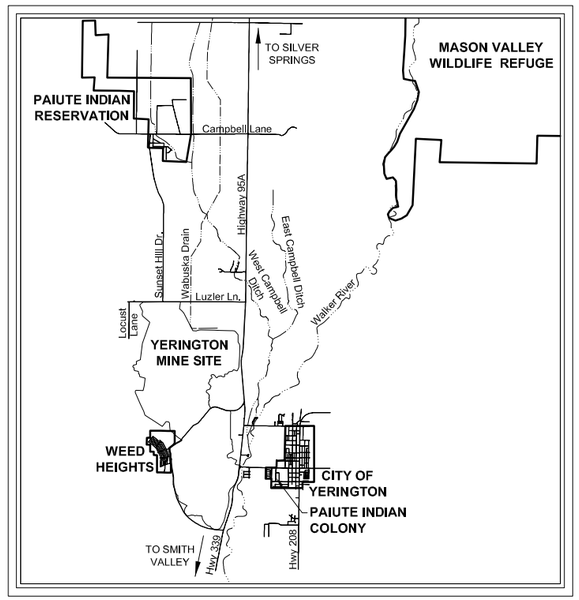



VICINITY MAP

NOT TO SCALE

DRAWING INDEX

| NO. | DRAWING NUMBER | DRAWING TITLE |
|---|---|---|
| 1 | --- | COVER SHEET |
| 2 | 138555-G-001 | ABBREVIATIONS AND STANDARD SYMBOLS |
| 3 | 138555-G-002 | AIR MONITORING STATION LOCATIONS |
| 4 | 138555-C-001 | CIVIL SITE PLAN |
| 5 | 138555-C-010 | SURVEY CONTROL BASEMAP |
| 6 | 138555-C-011 | THUMB POND TOPOGRAPHIC SURVEY |
| 7 | 138555-C-012 | SUB-AREA A TOPOGRAPHIC SURVEY |
| 8 | 138555-C-020 | SUB-AREA A SHEAR VANE AND THICKNESS RESULTS |
| 9 | 138555-C-030 | NORTH VLT BORROW SOURCE GRADING PLAN |
| 10 | 138555-C-031 | NORTH VLT BORROW SOURCE SECTIONS |
| 11 | 138555-C-040 | SOUTH VLT BORROW SOURCE GRADING PLAN |
| 12 | 138555-C-041 | SOUTH VLT BORROW SOURCE SECTIONS |
| 13 | 138555-C-100 | HAUL ROAD ALIGNMENT INDEX |
| 14 | 138555-C-101 | LINE AND CURVE TABLES, CUT AND FILL QUANTITY TABLES AND HAUL ROAD DESIGN SUMMARY |
| 15 | 138555-C-110 | ALIGNMENT 1 - SHEET 1 - PLAN AND PROFILE 2-WAY ROAD FROM NORTH VLT BORROW SOURCE TO THUMB POND (NVLT) |
| 16 | 138555-C-111 | ALIGNMENT 1 - SHEET 2 - PLAN AND PROFILE 2-WAY ROAD FROM NORTH VLT BORROW SOURCE TO THUMB POND (NVLT) |
| 17 | 138555-C-120 | ALIGNMENT 2 - SHEET 1 - OVERALL PLAN LOOP ROAD TO SUB-AREA A (SVLT) |
| 18 | 138555-C-121 | ALIGNMENT 2 - SHEET 2 - OVERALL PROFILE LOOP ROAD TO SUB-AREA A (SVLT) |
| 19 | 138555-C-122 | ALIGNMENT 2 - SHEET 3 - DETAILED PLAN LOOP ROAD TO SUB-AREA A (SVLT) |
| 20 | 138555-C-123 | ALIGNMENT 2 - SHEET 4 - DETAILED PLAN AND PROFILE LOOP ROAD TO SUB-AREA A (SVLT) |
| 21 | 138555-C-124 | ALIGNMENT 2 - SHEET 5 - DETAILED PLAN AND PROFILE LOOP ROAD TO SUB-AREA A (SVLT) |
| 22 | 138555-C-201 | THUMB POND INTERIM COVER BUILD OUT |
| 23 | 138555-C-202 | THUMB POND INTERIM COVER BUILD OUT SECTIONS |
| 24 | 138555-C-211 | SUB-AREA A INTERIM COVER BUILD OUT |
| 25 | 138555-C-212 | SUB-AREA A INTERIM COVER BUILD OUT SECTIONS |
| 26 | 138555-C-300 | TYPICAL SECTIONS |
| 27 | 138555-C-400 | TYPICAL BMP'S |




SITE LOCATION MAP

NOT TO SCALE

PREPARED BY:

Brown AND Caldwell

3264 GONI ROAD, SUITE 153
CARSON CITY, NEVADA 89706
(775) 883-4118

Richard A. Mattucci, P.E.
NEVADA P.E. NO. 12645
PRINCIPAL ENGINEER
BROWN AND CALDWELL

PREPARED FOR:

Atlantic Richfield Company

4 CENTERPOINTE DRIVE
LA PALMA, CALIFORNIA 90623
(661) 287-3855

# FINAL DESIGN
# FOR CONSTRUCTION

## GENERAL

- NEW FACILITIES (SOLID)
- EXISTING EQUIPMENT, PIPING OR STRUCTURES (SCREENED)
- MATCH LINE
- CENTER LINE
- OHP — EXISTING OVERHEAD POWER
- UGE — EXISTING UNDERGROUND ELECTRICAL
- 8020 — EXISTING GRADE CONTOURS
- 110 — FINISH GRADE CONTOURS
- MINE SITE BOUNDARY
- LIMIT OF EARTHWORKS
- PROJECT LIMITS
- EXISTING MAINTENANCE ROAD

## CIVIL

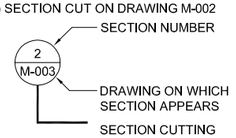
- NATURAL GROUND OR GRADE
- GRANULAR MATERIAL SUCH AS CRUSHED ROCK, GRAVEL OR VLT
- CONCRETE
- REINFORCED CONCRETE
- BIAXIAL GEOGRID
- 4450 — FINISH GRADE SPOT ELEVATION
- SWALE OR DITCH
- EDGE OF WATER; FLOWLINE WITH DIRECTIONAL ARROW
- 3:1 — SLOPE (3 HOR TO 1 VERT), PLAN
- 3 / 1 — SLOPE (3 HOR TO 1 VERT), SECTION
- TREES, SHRUBS OR HEDGE
- EXISTING MANHOLE
- EXISTING FIRE HYDRANT OR STAND PIPE
- EXISTING WATER VALVE
- EXISTING GUY ANCHOR
- EXISTING CLEANOUT
- EXISTING ELECTRICAL RISER
- BURIED ACCESS VAULT
- EXISTING DRAIN INLET
- EXISTING POWER POLE
- EXISTING SIGN
- EXISTING SERVICE POLE
- SURVEY CONTROL POINT
- N1000 E1000 — COORDINATES W/ GRID POINT
- UW-1S — EXISTING WELL (MONITORING OR OTHER)
- MW-1S — EXISTING INACTIVE WELL (MONITORING OR OTHER)
- AM-2 — EXISTING AIR MONITORING STATION
- EP-2 — PROPOSED AIR MONITORING STATION
- HAUL TRUCK TRAFFIC FLOW DIRECTION

## ABBREVIATIONS

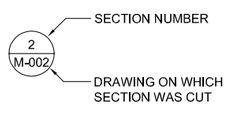
| | |
|---|---|
| 1W | POTABLE WATER |
| & | AND |
| @ | AT |
| X | BY |
| ℄ | CENTERLINE |
| [ | CHANNEL |
| Ø | DIAMETER |
| # | NUMBER |
| ℔ | PROPERTY LINE |
| □ | SQUARE |
| ∠, L | STRUCTURAL ANGLE |
| AASHTO | ASSOCIATION OF STATE, HIGHWAYS AND TRANSPORTATION OFFICIALS |
| AB | ANCHOR BOLT, AGGREGATE BASE |
| AC | ASPHALTIC CONCRETE |
| ADJ | ADJACENT |
| AL | ASPHALT LINER |
| ANC | ANCHOR |
| APN | ASSESSOR'S PARCEL NUMBER |
| APPROX | APPROXIMATE |
| ARC | ATLANTIC RICHFIELD COMPANY |
| ARV | AIR RELIEF VALVE |
| ASTM | AMERICAN SOCIETY FOR TESTING AND MATERIALS |
| AVR | AIR/VACUUM RELIEF VALVE |
| AWG | AMERICAN WIRE GAUGE |
| AWWA | AMERICAN WATER WORKS ASSOCIATION |
| B.F. | BLIND FLANGE |
| BFP | BACKFLOW PREVENTER |
| BFS | BEGIN FULL SUPER |
| BFV | BUTTERFLY VALVE |
| BLDG | BUILDING |
| BMP | BEST MANAGEMENT PRACTICE |
| BNC | BEGIN NORMAL CROWN |
| BNS | BEGIN NORMAL SHOULDER |
| BOA | BEGINNING OF ALIGNMENT |
| BOT | BOTTOM |
| BP | ALIGNMENT BEGINNING |
| BV | BALL VALVE |
| BVCE | VERTICAL TANGENT-CURVE INTERSECTION ELEVATION |
| BVCS | VERTICAL TANGENT-CURVE INTERSECTION STATION |
| CAV | COMBINATION AIR VALVE |
| CB | CATCH BASIN |
| CIP | CAST IN PLACE |
| CL | PIPE CLASS, CENTERLINE |
| CLR | CLEAR, CLEARANCE |
| CLSM | CONTROL LOW STRENGTH MATERIAL |
| CMP | CORRUGATED METAL PIPE |
| COMM | COMMUNICATIONS |
| CONC | CONCRETE |
| CONST | CONSTRUCTION |
| CONT | CONTINUOUS |
| CPLG | COUPLING |
| CTS | COPPER TUBING SIZING |
| CU | CUBIC |
| DET | DETAIL |
| DI | DUCTILE IRON |
| DIA. | DIAMETER |
| DIP | DUCTILE IRON PIPE |
| DWG | DRAWING |
| E | ELECTRIC, EAST, EASTING |
| EA | EACH |
| EC | END OF CURVE |
| EF | EACH FACE |
| EFS | END FULL SUPER |
| EL, ELEV | ELEVATION |
| ELECT | ELECTRICAL |
| ELL | ELBOW |
| ENC | END NORMAL CROWN |
| ENS | END NORMAL SHOULDER |
| EOA | END OF ALIGNMENT |
| EOP | EDGE OF PAVEMENT |
| EP | ALIGNMENT END |
| EPA | U.S. ENVIRONMENTAL PROTECTION AGENCY |
| EQ. | EQUAL |
| EQUIP | EQUIPMENT |
| EVCE | VERTICAL CURVE-TANGENT INTERSECTION ELEVATION |
| EVCS | VERTICAL CURVE-TANGENT INTERSECTION STATION |
| EW | EACH WAY |
| EW/EF | EACH WAY EACH FACE |
| (E), EX | EXISTING |
| EXP | EXPANSION |
| EXT | EXTERIOR, EXTENSION |
| FAB | FABRICATE |
| FCA | FLANGE COUPLING ADAPTER |
| FH | FLAT HEAD OR FIRE HYDRANT |
| FIN | FINISH |
| FL. | FLOW LINE |
| FLG | FLANGE |
| FLEX | FLEXIBLE |
| FLUID | PROCESS ALTERED LIQUID |
| FM | FORCE MAIN |
| FMS | HLP FLUID MANAGEMENT SYSTEM (ARIMETCO) |
| FT | FEET |
| FTG | FOOTING |
| G | GAS |
| GEOGRID | BIAXIAL GEOGRID |
| GEOID | GEODETIC IDENTIFICATION (SURVEY ELLIPSE) |
| GA | GAUGE |
| GAL | GALLON |
| GPM | GALLONS PER MINUTE |
| GR | GRADE, GROUND |
| GV | GATE VALVE, GAS VALVE |
| HB | HOSE BIB |
| HDPE | HIGH DENSITY POLYETHELYENE |
| HLP | HEAP LEACH PAD |
| HORIZ | HORIZONTAL |
| HP | HIGH POINT, HORSE POWER |
| HR | HOUR |
| HT | HEIGHT |
| ID | INSIDE DIAMETER |
| IE | INVERT ELEVATION |
| IN | INCH |
| INV | INVERT |
| IP | IRON PIPE |
| IPS | IRON PIPE SIZE |
| IPT | IRON PIPE THREAD |
| K | CURVE COEFFICIENT |
| LB | POUND |
| LC | LEVEL CROWN |
| LEP | LINED EVAPORATION POND |
| LF | LINEAL FEET |
| low pH | ACIDIC, pH < 5 |
| LVC | LENGTH VERTICAL CURVE |
| MAX | MAXIMUM |
| MECH | MECHANICAL |
| M | METER |
| MDD | MAXIMUM DRY DENSITY |
| MFR | MANUFACTURER |
| MH | MANHOLE |
| MIN | MINIMUM |
| MISC | MISCELLANEOUS |
| MJ | MECHANICAL JOINT |
| MON. | MONUMENT |
| MPH | MILES PER HOUR |
| N | NORTH, NORTHING |
| (N) | NEW |
| NAD | NORTH AMERICAN DATUM |
| NAVD | NORTH AMERICAN VERTICAL DATUM |
| NGVD | NATIONAL GEODETIC VERTICAL DATUM |
| N.I.C. | NOT IN CONTRACT |
| NO. | NUMBER |
| NOM | NOMINAL |
| NTS | NOT TO SCALE |
| OC | ON CENTER |
| OCM | OPTIMUM WATER CONTENT |
| OD | OUTSIDE DIAMETER |
| OF | OUTSIDE FACE/ OVERFLOW |
| OH | OVER HEAD |
| OU | OPERABLE UNIT |
| PC | TANGENT-CURVE INTERSECT |
| PE | PLAIN END, POLYETHYLENE |
| pH | POTENTIAL OF HYDROGEN |
| PI | TANGENT-TANGENT INTERSECT |
| PL | PLATE, PROPERTY LINE |
| P.O. | PUSH ON |
| P.O.C. | POINT OF CONNECTION |
| PP | POWER POLE |
| PRC | REVERSE CURVE-CURVE INTERSECT |
| PRV | PRESSURE REDUCING VALVE |
| PS | PUMP STATION |
| PSI | POUNDS PER SQUARE INCH |
| PSF | POUNDS PER SQUARE FOOT |
| PT | CURVE-TANGENT INTERSECTION |
| PVC | POLYVINYL CHLORIDE |
| PVI | POINT OF VERTICAL INTERSECTION |
| PVMT | PAVEMENT |
| PWS | PUMPBACK WELL SYSTEM (ANACONDA) |
| R | RADIUS |
| RAF | RAFFINATE |
| RC | REVERSE CROWN |
| RCP | REINFORCED CONCRETE PIPE |
| RD | ROAD |
| RED | REDUCER |
| REF | REFERENCE |
| REINF | REINFORCING, REINFORCED |
| RES | RESTRAINED JOINT |
| RPM | REVOLUTIONS PER MINUTE |
| RPP | REDUCED PRESSURE PRINCIPLE |
| R/W | RIGHT OF WAY |
| RW | RAW WATER |
| S | SEWER, SOUTH, SLOPE |
| SCH | SCHEDULE |
| SDR | STANDARD DIMENSION RATIO |
| SEC | SECOND |
| SHT | SHEET |
| SIM | SIMILAR |
| SP | STAND PIPE |
| SPEC | SPECIFICATIONS |
| SS | STAINLESS STEEL, SANITARY SEWER |
| STA | STATION |
| STL | STEEL |
| SD | STORM DRAIN |
| ST | SULFIDE TAILS |
| STD | STANDARD |
| STRUCT | STRUCTURAL |
| SUBS | SUBSTITUTIONS |
| SWP | STORM WATER POND |
| T&B | TOP AND BOTTOM |
| TEL | TELEPHONE |
| TOC | TOP OF CONCRETE |
| TYP | TYPICAL |
| UEP | UNLINED EVAPORATION POND |
| VC | VERTICAL CURVE |
| VERT | VERTICAL |
| VLT | VAT LEACH TAILINGS MATERIAL |
| W | WEST |
| W/ | WITH |
| W/I | WITHIN |
| W/O | WITHOUT |
| WM | WATER METER |
| WW | WASTEWATER |
| YD | YARD |
| YMS | YERINGTON MINE SITE |

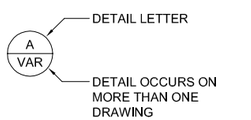
## SECTION AND DETAIL NUMBERING SYSTEM

(1) SECTION CUT ON DRAWING M-002




(2) ON DRAWING M-003 THIS SECTION IDENTIFIED




(3) DETAILS ARE CROSS-REFERENCED IN A SIMILAR MANNER.

### GENERAL NOTES:

1. THIS DRAWING IS GENERAL IN NATURE. SOME SYMBOLS SHOWN HEREON MAY NOT BE USED ON THE CONTRACT DRAWINGS.
2. SYMBOLS ARE ARRANGED ON SPECIFIC DRAWINGS AND IN CATEGORIES FOR CONVENIENCE ONLY; SYMBOLS MAY BE USED ON ANY OF THE CONTRACT DRAWINGS.

| REVISIONS NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| | | | | | |

**FINAL DESIGN FOR CONSTRUCTION**

ENGINEER

PREPARED BY:
Brown AND Caldwell
3264 GONI ROAD, SUITE 153
CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118

| | | |
|---|---|---|
| DESIGNED | RDH | 5/10 |
| DRAWN | RDH | 5/10 |
| CHECKED | RAM | 5/10 |
| APPROVED | RAM | 5/10 |
| APPROVED | | |
| APPROVED | | |

PREPARED FOR:
Atlantic Richfield Company

REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

TITLE
**GENERAL**

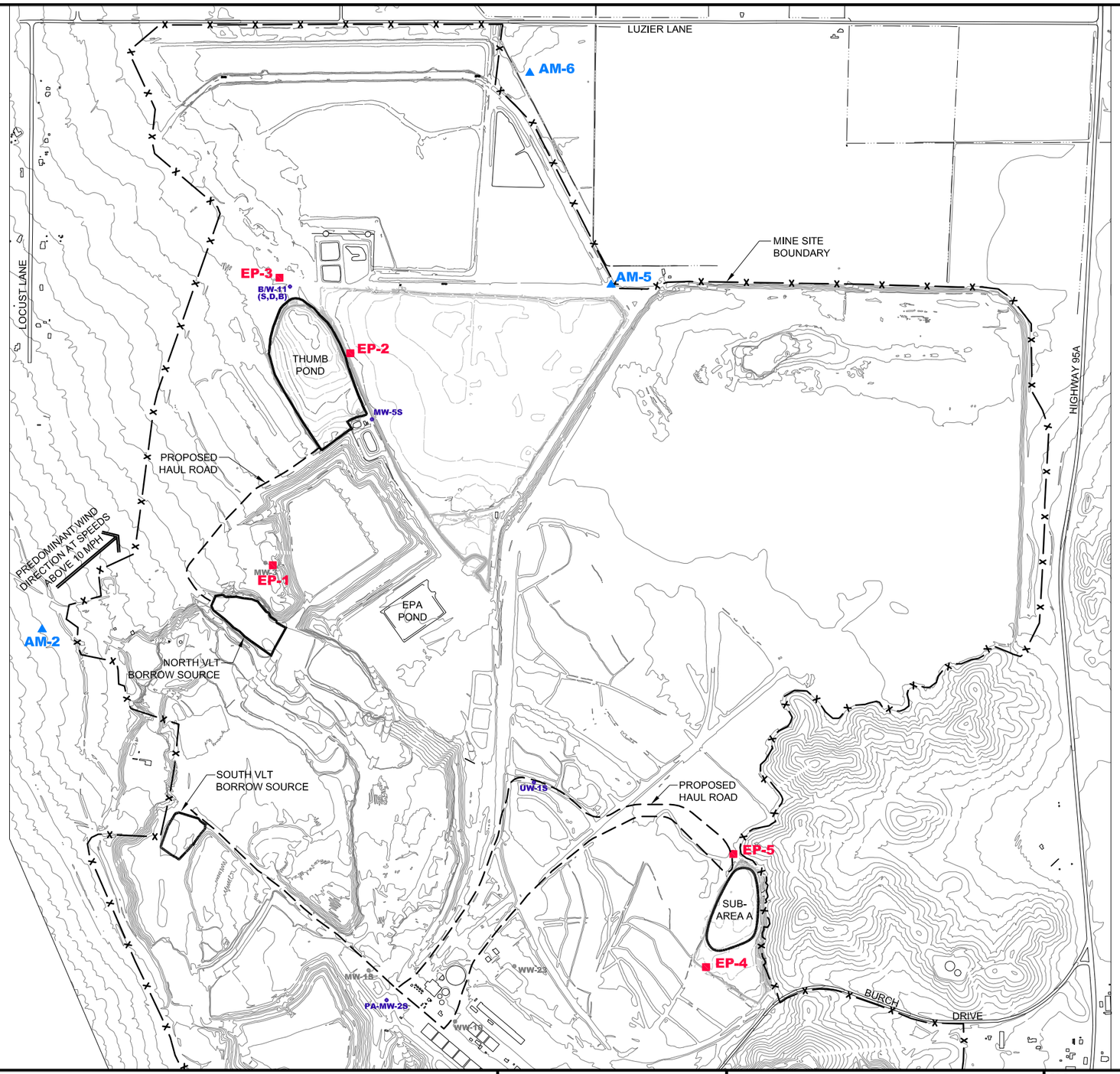
**ABBREVIATIONS AND STANDARD SYMBOLS**

SCALE NO SCALE — LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY)

REVISION

DRAWING NUMBER
**138555-G-001**

SHEET NUMBER
**2 OF 27**




EXPLANATION

- AM-2 — EXISTING AIR MONITORING STATION LOCATION (MAINTAINED BY ARC)
- EP-1 — PROPOSED AIR MONITORING STATION LOCATION FOR REMOVAL ACTION (MAINTAINED BY CONTRACTOR PER TECHNICAL SPECIFICATION SECTION 01520)
- UW-1S — MONITOR WELL (WATER MONITORING WELL NETWORK)
- MW-1S — EXISTING INACTIVE WELL (MONITORING OR OTHER)

N

600' 300' 0 600'

Path: P:\Arco-Yerington\Evaporation Pond-Sulfide Tailings\136742 - Year 2009 Files\CAD\C3D\Thumb Pond_Sub-Area A\100% Design\2-Sheets\G-G Filename: 138555-G-002 Plot date: Jun 16, 2010-06:44:25am CAD User: rhunt

| REVISIONS NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| | | | | | |

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CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118

| | | |
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| DESIGNED | RDH | 5/10 |
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| APPROVED | RAM | 5/10 |
| APPROVED | | |
| APPROVED | | |

PREPARED FOR:

Atlantic Richfield Company

REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

TITLE

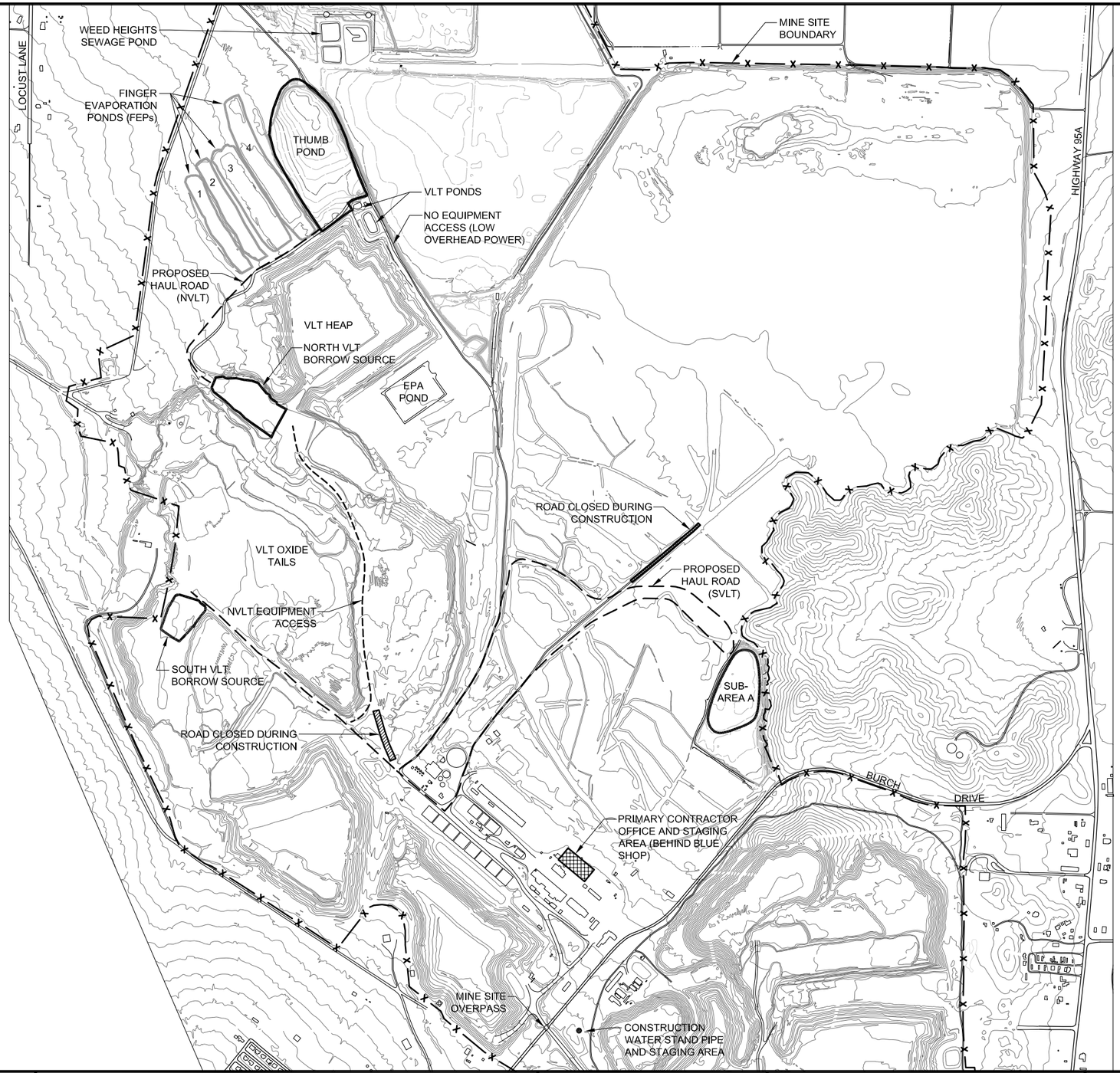
**GENERAL**

**AIR MONITORING STATION LOCATIONS**

SCALE 1"= 600' — LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY) — REVISION

DRAWING NUMBER: **138555-G-002**

SHEET NUMBER: **3 OF 27**




NOTES:

1. CONTOURS FROM AERIAL TOPOGRAPHY 2001, SURVEY CONTROL PROVIDED ON DWG C-010.

| NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| | | | | | |

REVISIONS

**FINAL DESIGN FOR CONSTRUCTION**

ENGINEER

PREPARED BY:

Brown AND Caldwell

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CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118

| | | |
|---|---|---|
| DESIGNED | RDH | 5/10 |
| DRAWN | RDH | 5/10 |
| CHECKED | RAM | 5/10 |
| APPROVED | RAM | 5/10 |
| APPROVED | | |
| APPROVED | | |

PREPARED FOR:

Atlantic Richfield Company

REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

TITLE

**CIVIL**

**CIVIL SITE PLAN**

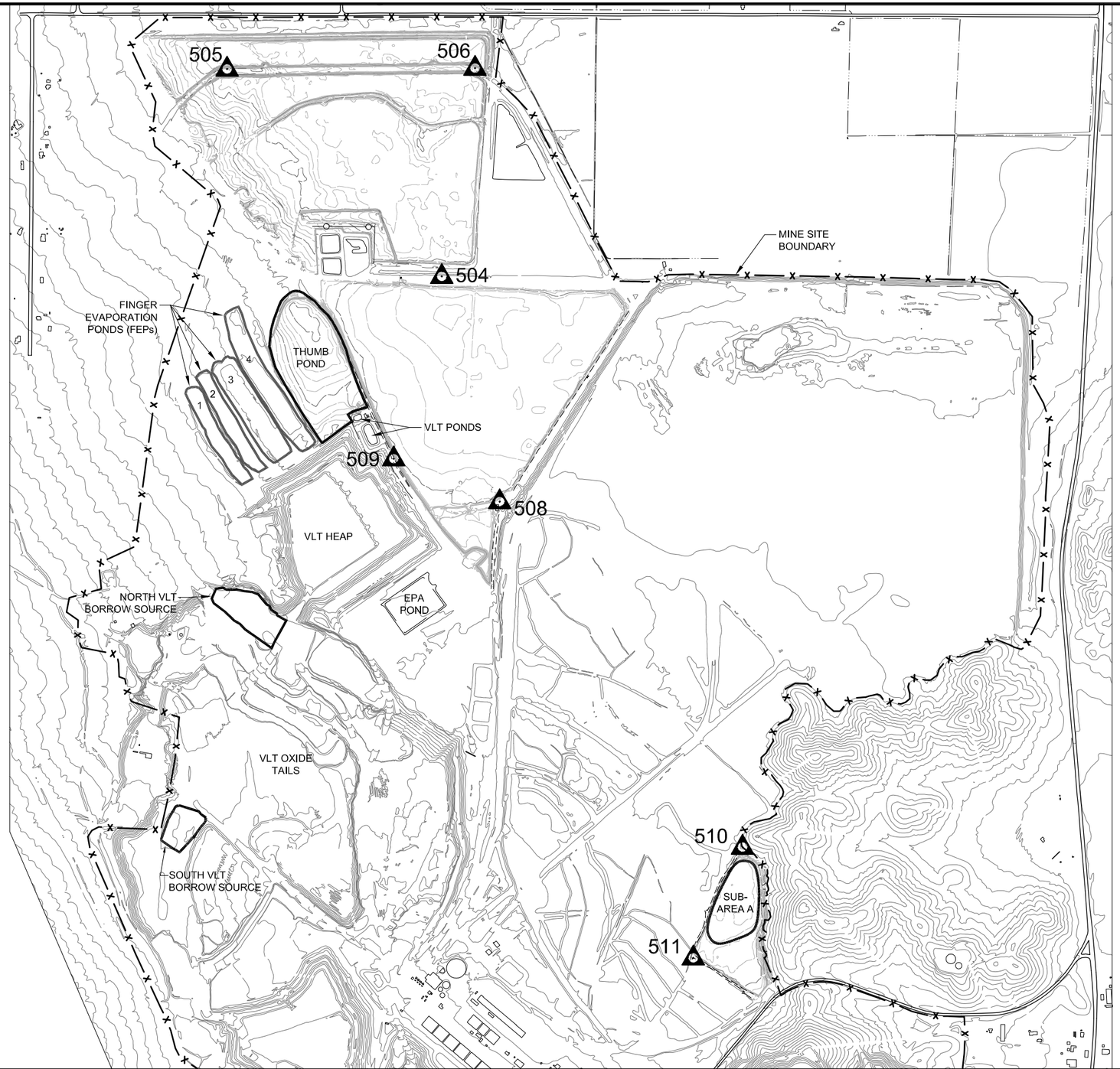
SCALE 1" = 600' LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY)

REVISION

DRAWING NUMBER **138555-C-001**

SHEET NUMBER **4 OF 27**

Path: P:\Arco-Yerington\Evaporation Pond-Sulfide Tailings\136742 - Year 2009 Files\CAD\C3D\Thumb Pond_Sub-Area A\100% Design\2-Sheets\C-C Filename: 138555-C-001 Plot date: Jun 16, 2010-06:53:03am CAD User: rhunt




## SUMMARY OF SURVEY CONTROL POINTS

| CONTROL POINT | GRID COORDINATES | | TOP OF MONUMENT ELEVATION (FT.) | MONUMENT DESCRIPTION |
|---|---|---|---|---|
| | NORTHING | EASTING | | |
| 504 | 1554644.36 | 323500.87 | 4364.46 | 5/8" REBAR W/ RED PLASTIC CAP LABELED "TRI STATE CONTROL" |
| 505 | 1556790.14 | 321279.87 | 4368.35 | 5/8" REBAR W/ RED PLASTIC CAP LABELED "TRI STATE CONTROL" |
| 506 | 1556798.44 | 323844.81 | 4367.83 | 5/8" REBAR W/ RED PLASTIC CAP LABELED "TRI STATE CONTROL" |
| 508 | 1552313.75 | 324099.77 | 4369.52 | 5/8" REBAR W/ RED PLASTIC CAP LABELED "TRI STATE CONTROL" |
| 509 | 1552757.64 | 323003.78 | 4382.55 | 5/8" REBAR W/ RED PLASTIC CAP LABELED "TRI STATE CONTROL" |
| 510 | 1548740.06 | 326611.67 | 4442.32 | REBAR AND CAP |
| 511 | 1547593.81 | 326102.33 | 4439.93 | REBAR AND CAP |

## BASIS OF BEARINGS:

NAD27 - Grid North (from Lumos Engineering)
All coordinates are GRID coordinates.

## BASIS OF ELEVATION:

NGVD29
NGS Benchmark K320 Elevation = 4417.05' (NGVD29)
and E320 Elevation = 4332.69' (NGVD29)

N

600' 300' 0 600'

ALL SURVEY INFORMATION PROVIDED
BY TRI STATE SURVEYING LTD.
425 EAST LONG STREET
CARSON CITY, NV. 89706
PHONE: (775) 887-9911

## SURVEYED AREA:

LINED EVAPORATION POND:
UNLINED EVAPORATION POND:
THUMB POND:
SUB-AREA A:
SOUTH VLT HAUL ROAD:

## SURVEY DATE:

FEBRUARY 4,5,11,12 & 17, 2009
APRIL 14, 15 & 16, 2009
JUNE 29 & 30, 2009
SEPTEMBER 23, 2009
MAY 11, 2010

## NOTES:

1. ALL ADDITIONAL SITE TOPOGRAPHY NOT LISTED ABOVE BASED ON AERIAL PHOTOGRAPHY DATED OCTOBER 3, 2001 BY THE AERO-DATA CORPORATION.
2. AERIAL PHOTOGRAPH PROJECTION IS NEVADA STATE PLANE, WEST ZONE 1927 NORTH AMERICAN DATUM (FEET).

| REVISIONS NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| | | | | | |

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ENGINEER

PREPARED BY:
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3264 GONI ROAD, SUITE 153
CARSON CITY, NEVADA 89706
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| APPROVED | | |
| APPROVED | | |

PREPARED FOR:
Atlantic Richfield Company

REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

TITLE
**CIVIL**

**SURVEY CONTROL BASEMAP**

SCALE 1" = 600' — LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY)

DRAWING NUMBER: **138555-C-010**

SHEET NUMBER: **5 OF 27**

REVISION

Path: P:\Arco-Yerington\Evaporation Pond-Sulfide Tailings\136742 - Year 2009 Files\CAD\C3D\Thumb Pond_Sub-Area A\100% Design\2-Sheets\C-C Filename: 138555-C-010 Plot date: Jun 16, 2010-06:55:49am CAD User: rhunt


NOTES:
1. 100' X 100' GRID BASE SURVEY OF EXISTING SURFACE BY TRI STATE SURVEYING LTD. CARSON CITY, NEVADA, JUNE 2009.

| REVISIONS NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| | | | | | |

**FINAL DESIGN FOR CONSTRUCTION**

ENGINEER

PREPARED BY:

Brown AND Caldwell
3264 GONI ROAD, SUITE 153
CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118

| | | |
|---|---|---|
| DESIGNED | RDH | 5/10 |
| DRAWN | RDH | 5/10 |
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| APPROVED | RAM | 5/10 |
| APPROVED | | |
| APPROVED | | |

PREPARED FOR:

Atlantic Richfield Company

REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

TITLE

**CIVIL**

**THUMB POND TOPOGRAPHIC SURVEY**

SCALE 1" = 100' — LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY)

REVISION

DRAWING NUMBER **138555-C-011**

SHEET NUMBER **6 OF 27**


NOTES:
1. 100' X 100' GRID BASE SURVEY OF EXISTING SURFACE BY TRI STATE SURVEYING LTD, CARSON CITY, NEVADA, SEPTEMBER 2009.

| REVISIONS NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| | | | | | |

**FINAL DESIGN FOR CONSTRUCTION**

ENGINEER

PREPARED BY:
Brown AND Caldwell
3264 GONI ROAD, SUITE 153
CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118

| | | |
|---|---|---|
| DESIGNED | RDH | 5/10 |
| DRAWN | RDH | 5/10 |
| CHECKED | RAM | 5/10 |
| APPROVED | RAM | 5/10 |
| APPROVED | | |
| APPROVED | | |

PREPARED FOR:
Atlantic Richfield Company

REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

TITLE
**CIVIL**

**SUB-AREA A TOPOGRAPHIC SURVEY**

SCALE 1" = 60' | LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY) | REVISION

DRAWING NUMBER: **138555-C-012**

SHEET NUMBER: **7 OF 27**

TEST RESULTS BASIS:

1. SUMMARY OF SITE SAMPLING AND MATERIALS TESTING - YERINGTON MINE SITE, YERINGTON, NV. BLACK EAGLE CONSULTING, JUNE 2009.

2. SUPPLEMENTAL SUMMARY OF SITE SAMPLING AND MATERIALS TESTING - YERINGTON MINE SITE, YERINGTON, NV. BLACK EAGLE CONSULTING, SEPTEMBER 2009.

DEPTH:

3. TAILINGS DEPTH - BROWN AND CALDWELL, FEBRUARY 2009.

RP-01 3
RP-02 5
RP-07 2 16
RP-08 2 14
RP-09 1 7
RP-10 5 14
RP-06 7 12
RP-03 5
RP-11 5 7
RP-04 8
RP-05 7

14 12 10 8 5 3 7

MINE SITE BOUNDARY

60' 30' 0 60'

EXPLANATION

RP-04 8 14 — SHEAR VANE SAMPLE LOCATION; SHEAR STRENGTH (psi); DEPTH (INCHES)

| COLOR | RANGE (PSI) |
|---|---|
| | 0 - 2.00 |
| | 2.01 - 4.00 |
| | 4.01 - 6.00 |
| | 6.01 - 10.00 |
| | 10.01 - 21.00 |

| NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| | | | | | |

REVISIONS

**FINAL DESIGN FOR CONSTRUCTION**

ENGINEER


PREPARED BY:
Brown AND Caldwell
3264 GONI ROAD, SUITE 153
CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118


| | | |
|---|---|---|
| DESIGNED | RDH | 5/10 |
| DRAWN | RDH | 5/10 |
| CHECKED | RAM | 5/10 |
| APPROVED | RAM | 5/10 |
| APPROVED | | |
| APPROVED | | |

PREPARED FOR:
Atlantic Richfield Company

REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

TITLE
**CIVIL**

**SUB-AREA A**
**SHEAR VANE AND THICKNESS RESULTS**

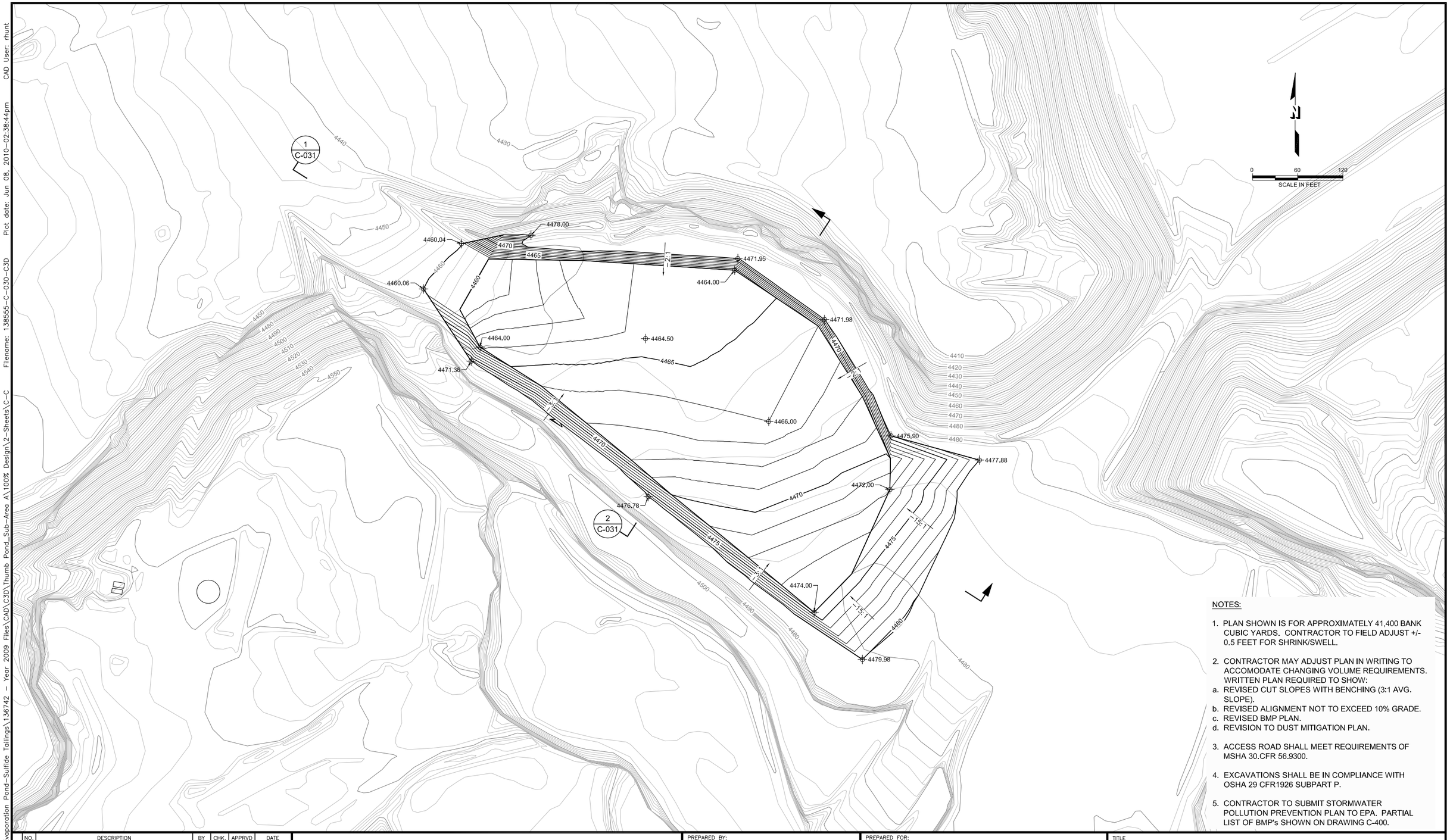
SCALE 1" = 60' — LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY)

REVISION

DRAWING NUMBER
**136742-C-020**

SHEET NUMBER
**8 OF 27**

Path: P:\Arco-Yerington\Evaporation Pond-Sulfide Tailings\136742 - Year 2009 Files\CAD\C3D\Thumb Pond_Sub-Area A\100% Design\2-Sheets\C-C Filename: 138555-C-020-C3D Plot date: Jun 08, 2010-11:58:13am CAD User: rhunt




NOTES:

1. PLAN SHOWN IS FOR APPROXIMATELY 41,400 BANK CUBIC YARDS. CONTRACTOR TO FIELD ADJUST +/- 0.5 FEET FOR SHRINK/SWELL.
2. CONTRACTOR MAY ADJUST PLAN IN WRITING TO ACCOMODATE CHANGING VOLUME REQUIREMENTS. WRITTEN PLAN REQUIRED TO SHOW:
   a. REVISED CUT SLOPES WITH BENCHING (3:1 AVG. SLOPE).
   b. REVISED ALIGNMENT NOT TO EXCEED 10% GRADE.
   c. REVISED BMP PLAN.
   d. REVISION TO DUST MITIGATION PLAN.
3. ACCESS ROAD SHALL MEET REQUIREMENTS OF MSHA 30.CFR 56.9300.
4. EXCAVATIONS SHALL BE IN COMPLIANCE WITH OSHA 29 CFR1926 SUBPART P.
5. CONTRACTOR TO SUBMIT STORMWATER POLLUTION PREVENTION PLAN TO EPA. PARTIAL LIST OF BMP's SHOWN ON DRAWING C-400.

| REVISIONS NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| | | | | | |

**FINAL DESIGN FOR CONSTRUCTION**

ENGINEER

PREPARED BY:

Brown AND Caldwell

3264 GONI ROAD, SUITE 153
CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118

| | | |
|---|---|---|
| DESIGNED | RDH | 5/10 |
| DRAWN | RDH | 5/10 |
| CHECKED | RAM | 5/10 |
| APPROVED | RAM | 5/10 |
| APPROVED | | |
| APPROVED | | |

PREPARED FOR:

Atlantic Richfield Company

REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

TITLE

**CIVIL**

**NORTH VLT BORROW SOURCE GRADING PLAN**

SCALE 1" = 60' — LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY)

REVISION

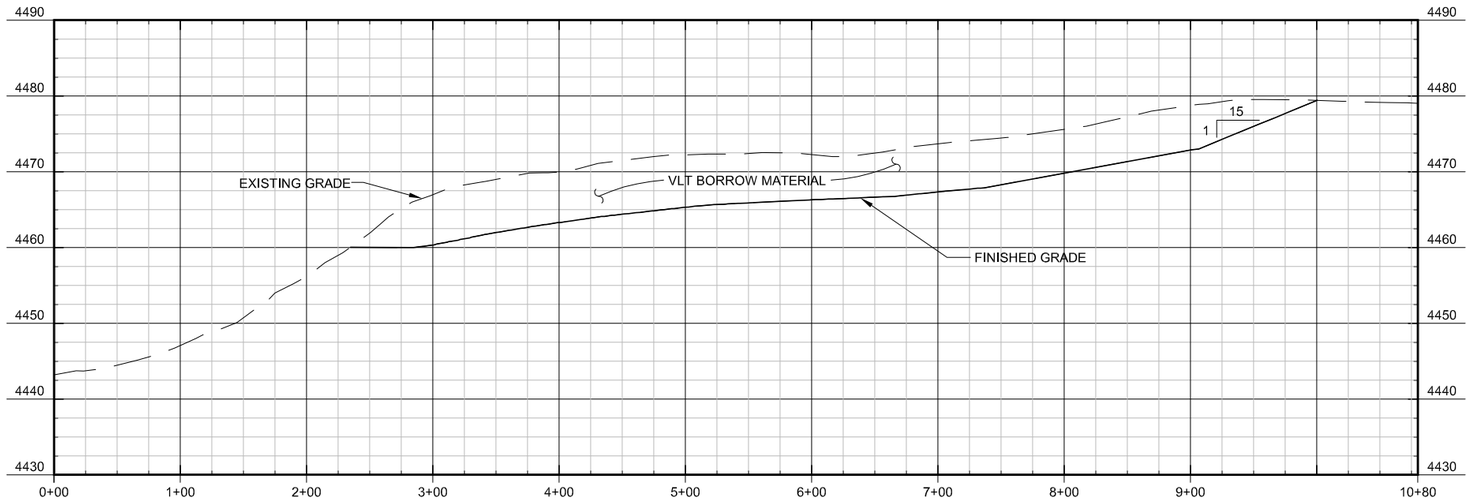
DRAWING NUMBER: **138555-C-030**

SHEET NUMBER: **9 OF 27**

Path: P:\Arco-Yerington\Evaporation Pond-Sulfide Tailings\136742 - Year 2009 Files\CAD\C3D\Thumb Pond_Sub-Area A\100% Design\2-Sheets\C-C Filename: 138555-C-030-C3D Plot date: Jun 08, 2010-02:38:44pm CAD User: rhunt

NOTES:

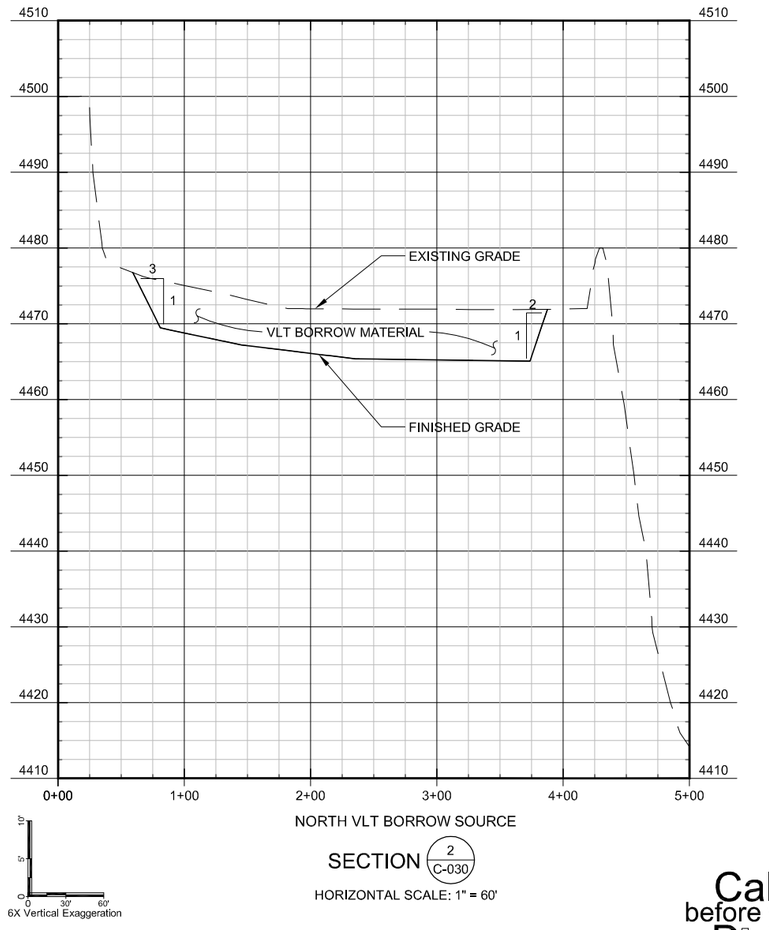
1. MINE SITE SPEED LIMIT 25 MPH.
2. IMPLEMENT APPROVED TRAFFIC MANAGEMENT PLAN PRIOR TO ACCESSING SITE WORK AREAS.
3. DUST MITIGATION TO BE IMPLEMENTED DURING ALL PROJECT WORK.
4. CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF SIGNIFICANT DIFFERENCES IN PLAN PRIOR TO EXECUTING WORK.
5. CONTRACTOR TO LIMIT EQUIPMENT RUTTING IN SOFT SEDIMENTS TO LESS THAN 1-INCH. RUTTING GREATER THAN 1-INCH REQUIRES SOIL OR GEOGRID STABILIZATION TO MITIGATE RUTTING CAUSED BY PROPOSED CONSTRUCTION EQUIPMENT.
6. ALL HAUL ROADS TO BE IN COMPLIANCE WITH MSHA 30 CFR 56.9300.
7. EXCAVATIONS SHALL BE IN COMPLIANCE WITH ACCEPTED HSSE PLAN AND OSHA 29 CFR 1926 SUBPART P.
8. CONTRACTOR TO SUBMIT STORMWATER POLLUTION PREVENTION PLAN TO EPA. PARTIAL LIST OF BMP's SHOWN ON DRAWING C-400.




NORTH VLT BORROW SOURCE

SECTION 1 / C-030

HORIZONTAL SCALE: 1" = 60'




NORTH VLT BORROW SOURCE

SECTION 2 / C-030

HORIZONTAL SCALE: 1" = 60'

Call before you Dig.
1-800-227-2600
UNDERGROUND SERVICE (USA)

| NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| | | | | | |

REVISIONS

**FINAL DESIGN FOR CONSTRUCTION**

ENGINEER

PREPARED BY:

Brown AND Caldwell
3264 GONI ROAD, SUITE 153
CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118

| | | |
|---|---|---|
| DESIGNED | RDH | 5/10 |
| DRAWN | RDH | 5/10 |
| CHECKED | RAM | 5/10 |
| APPROVED | RAM | 5/10 |
| APPROVED | | |
| APPROVED | | |

PREPARED FOR:

Atlantic Richfield Company

REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

TITLE

**CIVIL**

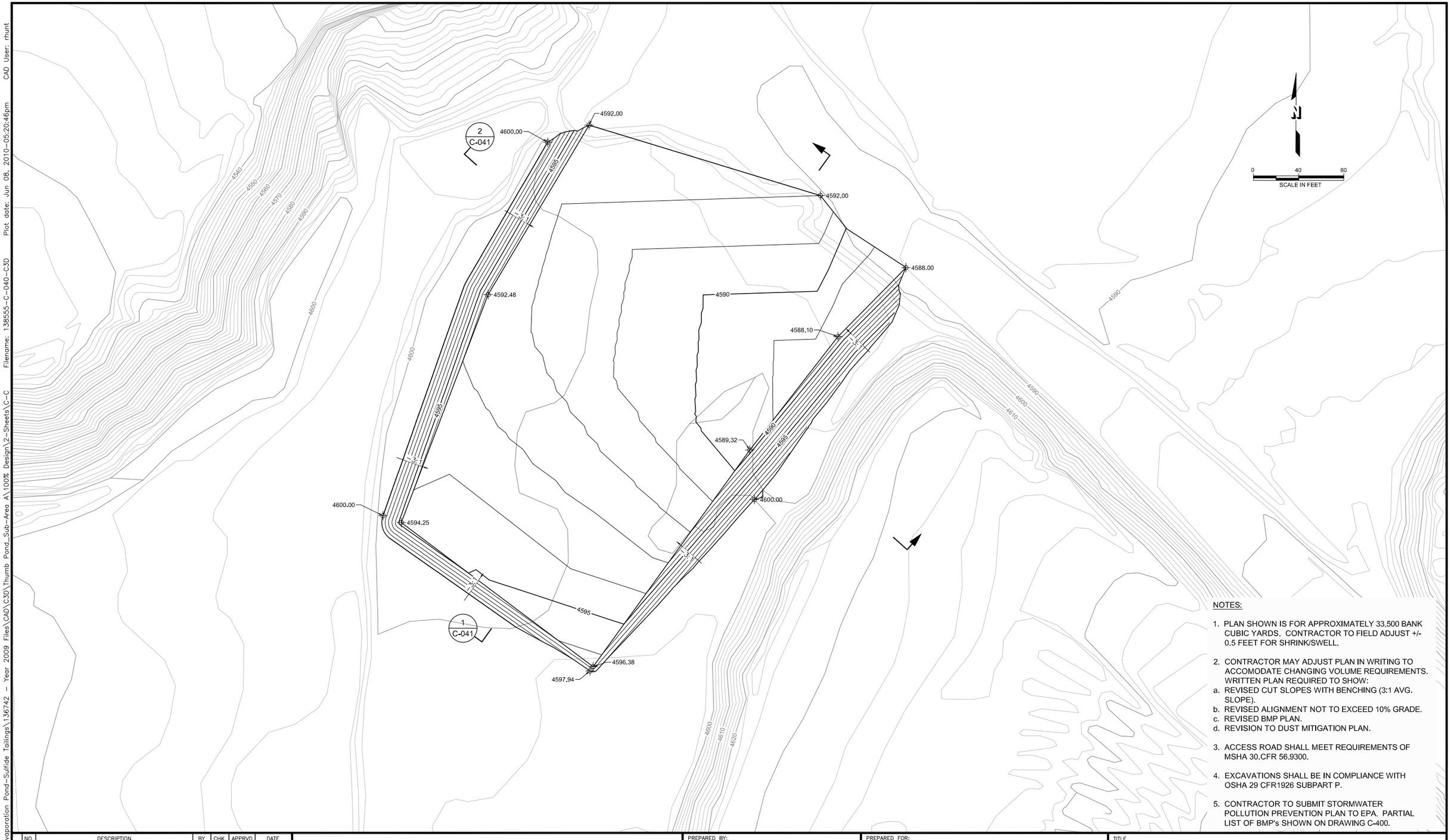
**NORTH VLT BORROW SOURCE SECTIONS**

SCALE AS SHOWN — LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY)

REVISION

DRAWING NUMBER: **138555-C-031**

SHEET NUMBER: **10 OF 27**




NOTES:

1. PLAN SHOWN IS FOR APPROXIMATELY 33,500 BANK CUBIC YARDS. CONTRACTOR TO FIELD ADJUST +/- 0.5 FEET FOR SHRINK/SWELL.
2. CONTRACTOR MAY ADJUST PLAN IN WRITING TO ACCOMODATE CHANGING VOLUME REQUIREMENTS. WRITTEN PLAN REQUIRED TO SHOW:
   a. REVISED CUT SLOPES WITH BENCHING (3:1 AVG. SLOPE).
   b. REVISED ALIGNMENT NOT TO EXCEED 10% GRADE.
   c. REVISED BMP PLAN.
   d. REVISION TO DUST MITIGATION PLAN.
3. ACCESS ROAD SHALL MEET REQUIREMENTS OF MSHA 30.CFR 56.9300.
4. EXCAVATIONS SHALL BE IN COMPLIANCE WITH OSHA 29 CFR1926 SUBPART P.
5. CONTRACTOR TO SUBMIT STORMWATER POLLUTION PREVENTION PLAN TO EPA. PARTIAL LIST OF BMP's SHOWN ON DRAWING C-400.

| REVISIONS NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| | | | | | |

**FINAL DESIGN FOR CONSTRUCTION**

ENGINEER

PREPARED BY:
Brown AND Caldwell
3264 GONI ROAD, SUITE 153
CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118

| | | |
|---|---|---|
| DESIGNED | RDH | 5/10 |
| DRAWN | RDH | 5/10 |
| CHECKED | RAM | 5/10 |
| APPROVED | RAM | 5/10 |
| APPROVED | | |
| APPROVED | | |

PREPARED FOR:
Atlantic Richfield Company

REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

TITLE
**CIVIL**

**SOUTH VLT BORROW SOURCE GRADING PLAN**

SCALE 1" = 40' (LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY))

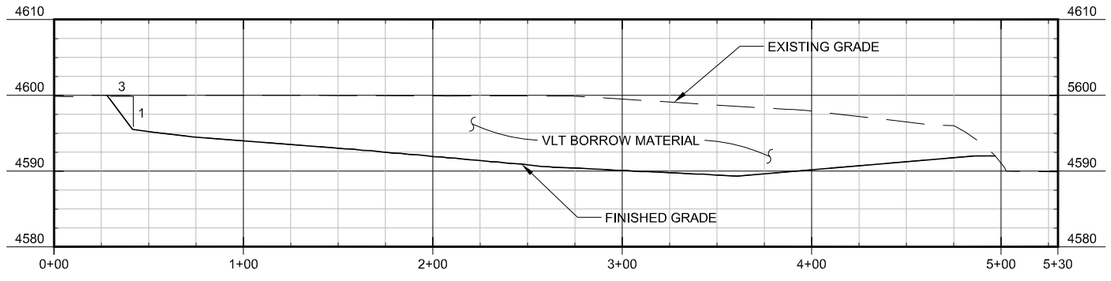
REVISION

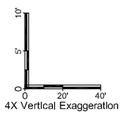
DRAWING NUMBER
**138555-C-040**

SHEET NUMBER
**11 OF 27**

NOTES:

1. MINE SITE SPEED LIMIT 25 MPH.
2. IMPLEMENT APPROVED TRAFFIC MANAGEMENT PLAN PRIOR TO ACCESSING SITE WORK AREAS.
3. DUST MITIGATION TO BE IMPLEMENTED DURING ALL PROJECT WORK.
4. CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF SIGNIFICANT DIFFERENCES IN PLAN PRIOR TO EXECUTING WORK.
5. CONTRACTOR TO LIMIT EQUIPMENT RUTTING IN SOFT SEDIMENTS TO LESS THAN 1-INCH. RUTTING GREATER THAN 1-INCH REQUIRES SOIL OR GEOGRID STABILIZATION TO MITIGATE RUTTING CAUSED BY PROPOSED CONSTRUCTION EQUIPMENT.
6. ALL HAUL ROADS TO BE IN COMPLIANCE WITH MSHA 30 CFR 56.9300.
7. EXCAVATIONS SHALL BE IN COMPLIANCE WITH ACCEPTED HSSE PLAN AND OSHA 29 CFR 1926 SUBPART P.
8. CONTRACTOR TO SUBMIT STORMWATER POLLUTION PREVENTION PLAN TO EPA. PARTIAL LIST OF BMP's SHOWN ON DRAWING C-400.

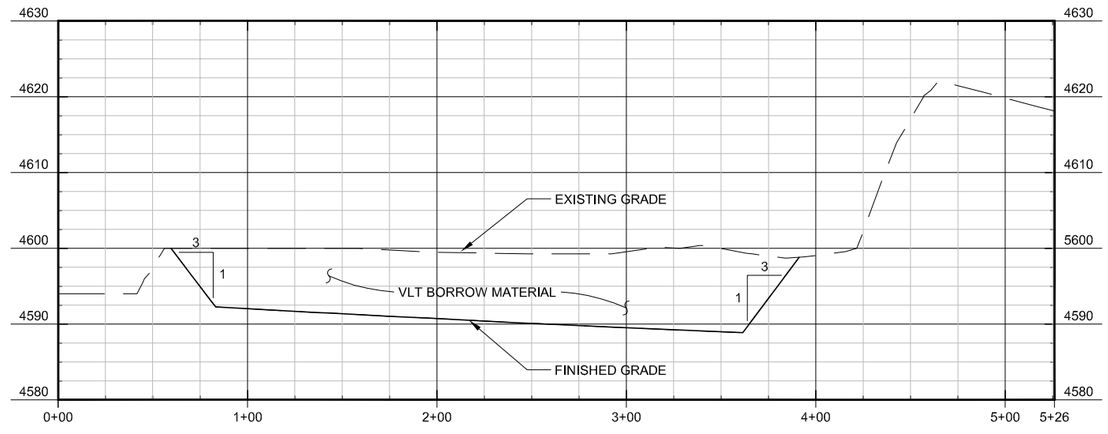


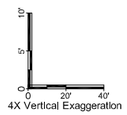




SOUTH VLT BORROW SOURCE

SECTION 1 / C-040

HORIZONTAL SCALE: 1" = 40'




SOUTH VLT BORROW SOURCE

SECTION 2 / C-040

HORIZONTAL SCALE: 1" = 40'

Call before you Dig.
1-800-227-2600
UNDERGROUND SERVICE (USA)

| NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| | | | | | |

REVISIONS

**FINAL DESIGN FOR CONSTRUCTION**

ENGINEER

PREPARED BY:

Brown AND Caldwell
3264 GONI ROAD, SUITE 153
CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118

| | | |
|---|---|---|
| DESIGNED | RDH | 5/10 |
| DRAWN | RDH | 5/10 |
| CHECKED | RAM | 5/10 |
| APPROVED | RAM | 5/10 |
| APPROVED | | |
| APPROVED | | |

PREPARED FOR:

Atlantic Richfield Company

REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

TITLE

**CIVIL**

**SOUTH VLT BORROW SOURCE SECTIONS**

SCALE AS SHOWN — LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY)

REVISION

DRAWING NUMBER: **138555-C-041**

SHEET NUMBER: **12 OF 27**


ALIGNMENT INDEX:

NVLT - 2-WAY ROAD FROM NORTH VLT BORROW SOURCE TO THUMB POND (APPROX. 2,310').

SVLT - SOUTH VLT BORROW SOURCE HAUL ROAD TO SUB-AREA A (APPROX. 13,061')

EXPLANATION:

APPROXIMATE PROJECT WORK AREA

NOTE:
ARC AND ITS CONTRACTORS RESERVE THE RIGHT TO MODIFY CONSTRUCTION HAUL ROAD CONFIGURATIONS AS NECESSARY DUE TO FIELD CONDITIONS, MSHA REQUIREMENTS OR FOR HAUL ROAD EFFICIENCIES.

N

600' 300' 0 600'

| REVISIONS NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| | | | | | |

**FINAL DESIGN FOR CONSTRUCTION**

ENGINEER

PREPARED BY:

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CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118

| | | |
|---|---|---|
| DESIGNED | RDH | 5/10 |
| DRAWN | RDH | 5/10 |
| CHECKED | RAM | 5/10 |
| APPROVED | RAM | 5/10 |
| APPROVED | | |
| APPROVED | | |

PREPARED FOR:

Atlantic Richfield Company

REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

TITLE

**CIVIL**

**HAUL ROAD ALIGNMENT INDEX**

SCALE 1" = 600' — LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY)

REVISION

DRAWING NUMBER: **138555-C-100**

SHEET NUMBER: **13 OF 27**

Path: P:\Arco-Yerington\Evaporation Pond-Sulfide Tailings\136742 - Year 2009 Files\CAD\C3D\Thumb Pond_Sub-Area A\100% Design\2-Sheets\C-C Filename: 138555-C-100 Plot date: Jun 16, 2010-10:14:53am CAD User: rhunt

| SUMMARY OF ESTIMATED QUANTITIES (ALIGNMENTS) | | | |
|---|---|---|---|
| ALIGNMENT | CUT (Cu. Yds.) | FILL (Cu. Yds.) | NET (Cu. Yds.) |
| NVLT | 3526 | 722 | 2804 (CUT) |
| SVLT | 23,942 | 10,469 | 13,473 (CUT) |
| | | TOTAL: | 16,277 (CUT) |

| SUMMARY OF ESTIMATED QUANTITIES (EVAPORATION PONDS) | | | |
|---|---|---|---|
| POND | CUT (Cu. Yds.) | FILL (Cu. Yds.) | NET (Cu. Yds.) |
| THUMB | 1010 | 44,976 | 43,966 (FILL) |
| SUB-AREA A | 126 | 31,668 | 31,542 (FILL) |
| | | TOTAL: | 75,508 (FILL) |

NOTE:
LINE (L) AND CURVE (C) LOCATIONS ARE SHOWN ON ROAD ALIGNMENT PLAN AND PROFILE SHEEETS.

## NVLT LINE AND CURVE TABLES

| Line Table: Alignments | | | | |
|---|---|---|---|---|
| Line # | Length | Direction | Start Point | End Point |
| L1 | 101.51 | N33° 34' 47.76"W | (320944.72,1551506.33) | (320888.58,1551590.89) |
| L2 | 561.99 | N39° 12' 23.07"E | (320898.93,1551748.26) | (321254.17,1552183.73) |
| L3 | 383.10 | N43° 50' 32.06"E | (321280.98,1552214.01) | (321546.34,1552490.32) |
| L4 | 315.71 | N60° 40' 14.10"E | (321598.91,1552533.10) | (321874.15,1552687.75) |
| L5 | 196.21 | N55° 04' 18.35"E | (321915.51,1552713.72) | (322076.38,1552826.07) |
| L6 | 205.33 | N53° 40' 20.76"E | (322076.38,1552826.07) | (322241.80,1552947.70) |

| Curve Table: Alignments | | | | | |
|---|---|---|---|---|---|
| Curve # | Radius | Length | Chord Direction | Start Point | End Point |
| C1 | 453.67 | 219.29 | N48° 51' 33.74"W | (321108.26,1551363.46) | (320944.72,1551506.33) |
| C2 | 130.00 | 169.45 | N3° 45' 42.20"E | (320888.58,1551590.89) | (320898.93,1551748.26) |
| C3 | 500.00 | 40.46 | N41° 31' 27.56"E | (321254.17,1552183.73) | (321280.98,1552214.01) |
| C4 | 200.00 | 68.10 | N50° 51' 29.72"E | (321546.34,1552490.32) | (321598.91,1552533.10) |
| C5 | 500.00 | 48.86 | N57° 52' 16.23"E | (321874.15,1552687.75) | (321915.51,1552713.72) |

| Haul Road Design Summary[1] | | | |
|---|---|---|---|
| **Haul Equipment[2]** | | | |
| Target Vehicle | Caterpillar 740 | | |
| Vehicle Operating Width | 12.5 | feet | |
| Haul Capacity | 43.5 | tons | |
| Gross Vehicle Weight | 160,055 | pounds | |
| | 80 | tons | |
| **Ramp Design Criteria** | | | |
| Maximum Ramp Grades: | 10% | percent | |
| Maximum Break Retarder (Loaded) Speed[2]: | 13 | mph | 3rd Gear |
| Design Maximum Downhill Speed: | 10 | mph | |
| Friction Factor: | 0.3 | unitless | |
| Stopping Distance: | 117 | Feet | |
| **Lane Design Information** | | | |
| Minimum Plan Design Width | | | |
| One Way Haul Road | 30 | feet | |
| Two Way Haul Road | 60 | feet | |
| Two Way - Haul Road with 12' Maintenance Lane | 48 | feet | |
| **Curve Design Information** | | | |
| Curve Radius (Feet - Inside of Lane Curve): | 130 | 140 | 160 |
| Speed Limit (mph): | 20 | 20 | 20 |
| Lane Curve Width (feet): | 34 | 33 | 31 |
| Curve Embankment (percent): | 4 | 2 | 0 |
| Notes: | | | |
| 1) Design Guidance From Haul Road Inspection Handbook (PH 99-I-4), MSHA, June 1999 | | | |
| 2) Specifications from Caterpillar Performance Handbook (39th Edition) | | | |

## SVLT LINE AND CURVE TABLES

| Line Table: Alignments | | | | |
|---|---|---|---|---|
| Line # | Length | Direction | Start Point | End Point |
| L1 | 336.20 | S50° 34' 24.40"E | (320911.17,1549198.32) | (321170.86,1548984.80) |
| L2 | 593.44 | S46° 15' 08.57"E | (321170.86,1548984.80) | (321599.55,1548574.45) |
| L3 | 329.50 | S53° 16' 22.46"E | (321599.55,1548574.45) | (321863.64,1548377.41) |
| L4 | 290.49 | S47° 17' 17.46"E | (321863.64,1548377.41) | (322077.09,1548180.37) |
| L5 | 198.90 | S49° 48' 42.20"E | (322077.09,1548180.37) | (322229.03,1548052.02) |
| L6 | 151.58 | S54° 14' 26.68"E | (322229.03,1548052.02) | (322352.03,1547963.44) |
| L7 | 99.90 | S53° 33' 27.91"E | (322352.03,1547963.44) | (322432.40,1547904.10) |
| L8 | 822.03 | S47° 23' 57.12"E | (322432.40,1547904.10) | (323037.48,1547347.68) |
| L9 | 91.51 | N52° 40' 22.72"E | (323037.48,1547347.68) | (323110.25,1547403.17) |
| L10 | 127.04 | N55° 05' 34.67"E | (323110.25,1547403.17) | (323214.43,1547475.87) |
| L11 | 124.85 | N39° 45' 14.59"E | (323253.74,1547511.98) | (323333.58,1547607.97) |
| L12 | 72.86 | N37° 44' 49.54"E | (323333.58,1547607.97) | (323378.19,1547665.58) |
| L13 | 71.46 | N37° 19' 15.36"E | (323378.19,1547665.58) | (323421.51,1547722.41) |
| L14 | 94.08 | N35° 39' 00.49"E | (323421.51,1547722.41) | (323476.34,1547798.85) |
| L15 | 88.89 | N39° 46' 01.29"E | (323476.34,1547798.85) | (323533.21,1547867.18) |
| L16 | 95.02 | N35° 44' 38.70"E | (323533.21,1547867.18) | (323588.71,1547944.30) |
| L17 | 98.88 | N33° 45' 28.46"E | (323588.71,1547944.30) | (323643.66,1548026.51) |
| L18 | 113.03 | N35° 30' 51.94"E | (323643.66,1548026.51) | (323709.32,1548118.52) |
| L19 | 97.62 | N35° 08' 19.43"E | (323709.32,1548118.52) | (323765.51,1548198.35) |
| L20 | 77.33 | N32° 52' 18.32"E | (323765.51,1548198.35) | (323807.48,1548263.29) |

| Line Table: Alignments | | | | |
|---|---|---|---|---|
| Line # | Length | Direction | Start Point | End Point |
| L21 | 80.56 | N30° 24' 11.13"E | (323807.48,1548263.29) | (323848.25,1548332.78) |
| L22 | 85.44 | N29° 25' 19.96"E | (323848.25,1548332.78) | (323890.22,1548407.20) |
| L23 | 65.40 | N24° 27' 26.03"E | (323890.22,1548407.20) | (323917.30,1548466.73) |
| L24 | 59.55 | N21° 19' 47.43"E | (323917.30,1548466.73) | (323938.96,1548522.20) |
| L25 | 261.66 | N19° 33' 07.85"E | (323938.96,1548522.20) | (324026.53,1548768.78) |
| L26 | 57.36 | N19° 08' 10.00"E | (324026.53,1548768.78) | (324045.33,1548822.97) |
| L27 | 39.06 | N25° 58' 02.78"E | (324054.47,1548844.98) | (324071.57,1548880.09) |
| L28 | 29.01 | N20° 31' 11.71"E | (324153.34,1549224.52) | (324163.50,1549251.69) |
| L29 | 40.04 | N7° 02' 21.45"E | (324191.46,1549365.68) | (324196.37,1549405.42) |
| L31 | 290.98 | S89° 47' 23.52"E | (325568.99,1549255.86) | (325859.97,1549254.79) |
| L32 | 365.91 | S50° 24' 16.77"E | (326097.60,1549168.76) | (326379.56,1548935.54) |
| L33 | 73.17 | S2° 58' 50.02"E | (326512.74,1548692.38) | (326516.55,1548619.31) |
| L34 | 700.66 | N44° 52' 34.36"W | (326413.28,1548574.70) | (325918.91,1549071.21) |
| L35 | 185.78 | N89° 47' 23.52"W | (325777.92,1549130.09) | (325592.14,1549130.77) |
| L36 | 455.15 | S63° 38' 15.88"W | (325483.14,1549106.20) | (325075.32,1548904.10) |
| L37 | 491.74 | S50° 55' 49.75"W | (325028.77,1548874.19) | (324646.98,1548564.26) |
| L38 | 356.54 | S45° 23' 05.48"W | (324646.98,1548564.26) | (324393.18,1548313.85) |
| L39 | 113.52 | S38° 33' 11.15"W | (324393.18,1548313.85) | (324322.43,1548225.07) |
| L40 | 139.33 | S42° 22' 25.96"W | (324322.43,1548225.07) | (324228.53,1548122.14) |
| L41 | 237.51 | S40° 31' 19.94"W | (324228.53,1548122.14) | (324074.20,1547941.59) |

| Line Table: Alignments | | | | |
|---|---|---|---|---|
| Line # | Length | Direction | Start Point | End Point |
| L42 | 103.55 | S37° 44' 00.98"W | (324074.20,1547941.59) | (324010.83,1547859.70) |
| L43 | 273.60 | S37° 16' 46.46"W | (324010.83,1547859.70) | (323845.11,1547642.00) |
| L44 | 106.96 | S16° 37' 26.54"W | (323812.61,1547578.07) | (323782.01,1547475.59) |
| L45 | 141.87 | S21° 36' 26.34"W | (323776.32,1547459.16) | (323724.07,1547327.26) |
| L46 | 111.97 | S14° 27' 56.07"W | (323716.36,1547303.57) | (323688.39,1547195.15) |
| L47 | 64.27 | S42° 39' 05.24"W | (323571.99,1546981.28) | (323528.44,1546934.01) |
| L48 | 642.00 | N49° 52' 58.83"W | (323528.44,1546934.01) | (323037.48,1547347.68) |

| Curve Table: Alignments | | | | | |
|---|---|---|---|---|---|
| Curve # | Radius | Length | Chord Direction | Start Point | End Point |
| C1 | 200.00 | 53.54 | N47° 25' 24.63"E | (323214.43,1547475.87) | (323253.74,1547511.98) |
| C2 | 200.00 | 23.85 | N22° 33' 06.39"E | (324045.33,1548822.97) | (324054.47,1548844.98) |
| C3 | 399.20 | 158.08 | N12° 15' 56.48"E | (324071.57,1548880.09) | (324104.94,1549033.55) |
| C4 | 678.30 | 197.71 | N14° 13' 18.23"E | (324104.94,1549033.55) | (324153.34,1549224.52) |
| C5 | 500.00 | 117.64 | N13° 46' 46.58"E | (324163.50,1549251.69) | (324191.46,1549365.68) |
| C6 | 134.25 | 214.24 | N47° 47' 43.88"E | (324196.37,1549405.42) | (324338.76,1549534.55) |
| C7 | 1074.80 | 728.44 | S61° 33' 18.47"E | (324338.76,1549534.55) | (324967.07,1549194.19) |
| C8 | 250.00 | 343.88 | S85° 10' 43.15"E | (324967.07,1549194.19) | (325283.35,1549167.51) |
| C9 | 500.00 | 303.64 | N72° 48' 46.91"E | (325283.35,1549167.51) | (325568.99,1549255.86) |
| C10 | 375.00 | 257.78 | S70° 05' 50.15"E | (325859.97,1549254.79) | (326097.60,1549168.76) |
| C11 | 375.00 | 283.98 | S28° 42' 36.43"E | (326379.56,1548935.54) | (326512.74,1548692.38) |
| *C12 | 60.00 | 145.81 | S66° 38' 15.75"W | (326516.55,1548619.31) | (326413.28,1548574.70) |
| C13 | 200.00 | 156.78 | N67° 19' 58.94"W | (325918.91,1549071.21) | (325777.92,1549130.09) |
| C14 | 250.00 | 112.69 | S77° 17' 48.76"W | (325592.14,1549130.77) | (325483.14,1549106.20) |
| C15 | 250.00 | 55.45 | S57° 17' 02.81"W | (325075.32,1548904.10) | (325028.77,1548874.19) |
| C16 | 200.00 | 72.10 | S26° 57' 06.50"W | (323845.11,1547642.00) | (323812.61,1547578.07) |
| C17 | 200.00 | 17.39 | S19° 06' 56.44"W | (323782.01,1547475.59) | (323776.32,1547459.16) |
| C18 | 200.00 | 24.93 | S18° 02' 11.20"W | (323724.07,1547327.26) | (323716.36,1547303.57) |
| C19 | 500.00 | 245.97 | S28° 33' 30.66"W | (323688.39,1547195.15) | (323571.99,1546981.28) |

* SUB-AREA A STAGING AREA EXEMPT FROM CURVE EMBANKMENT

| NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| REVISIONS | | | | | |

**FINAL DESIGN FOR CONSTRUCTION**

ENGINEER

PREPARED BY:
Brown AND Caldwell
3264 GONI ROAD, SUITE 153
CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118

| | | |
|---|---|---|
| DESIGNED | RDH | 5/10 |
| DRAWN | RDH | 5/10 |
| CHECKED | RAM | 5/10 |
| APPROVED | RAM | 5/10 |
| APPROVED | | |
| APPROVED | | |

PREPARED FOR:
Atlantic Richfield Company

REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

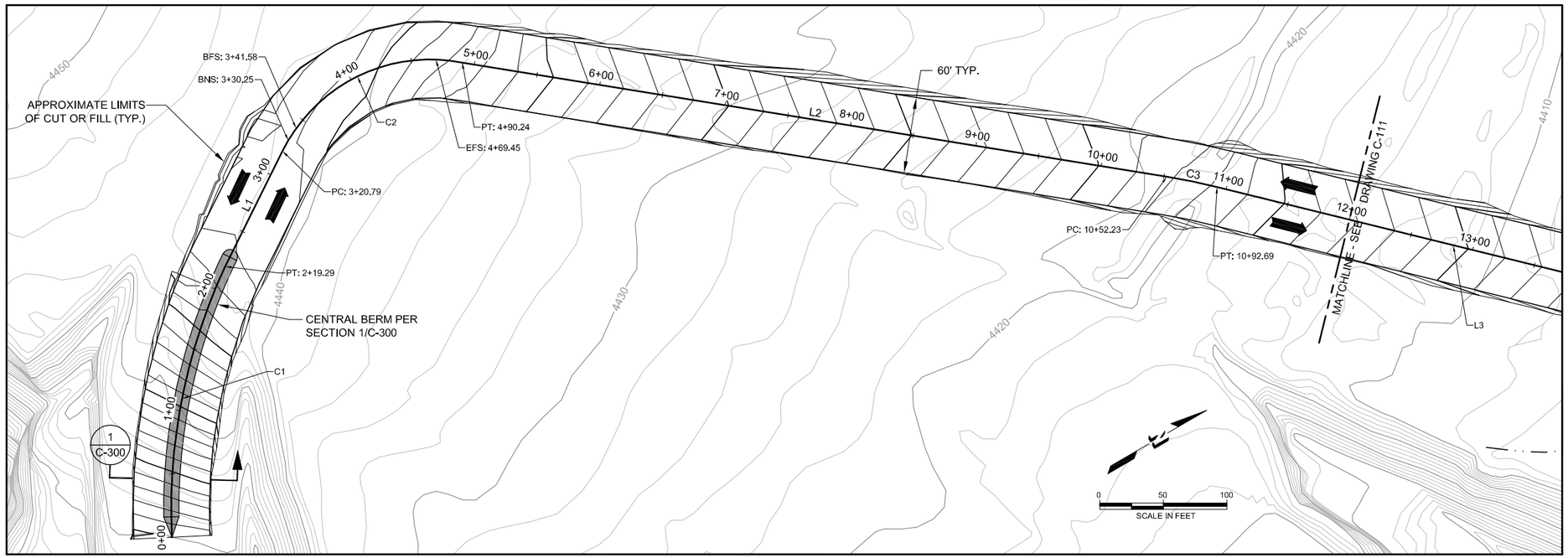
TITLE
**CIVIL**
**LINE AND CURVE TABLES, CUT AND FILL QUANTITY TABLES AND HAUL ROAD DESIGN SUMMARY**

SCALE NO SCALE — LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY)

DRAWING NUMBER: **138555-C-101**

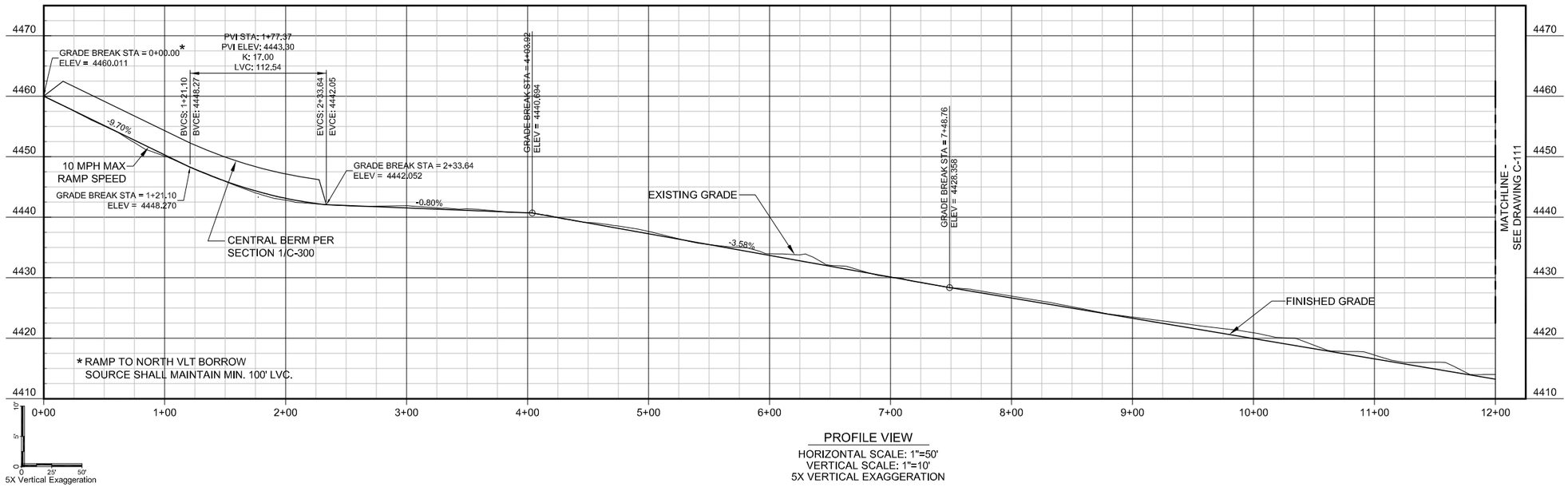
SHEET NUMBER: **14 OF 27**

REVISION




PLAN VIEW
SCALE: 1"=50'

NVLT HAUL ROAD SPEED LIMIT IS 20 MPH.




PROFILE VIEW
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=10'
5X VERTICAL EXAGGERATION

NOTES:

1. UNLESS SPECIFIED, GENERAL MINE SITE SPEED LIMIT IS 25 MPH.
2. IMPLEMENT APPROVED TRAFFIC MANAGEMENT PLAN PRIOR TO ACCESSING SITE WORK AREAS.
3. DUST MITIGATION TO BE IMPLEMENTED DURING ALL PROJECT WORK.
4. CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF SIGNIFICANT DIFFERENCES IN PLAN PRIOR TO EXECUTING WORK.
5. CONTRACTOR TO LIMIT EQUIPMENT RUTTING IN SOFT SEDIMENTS TO LESS THAN 1-INCH. RUTTING GREATER THAN 1-INCH REQUIRES SOIL OR GEOGRID STABILIZATION TO MITIGATE RUTTING CAUSED BY PROPOSED CONSTRUCTION EQUIPMENT.
6. ALL HAUL ROADS TO BE IN COMPLIANCE WITH MSHA 30 CFR 56.9300.
7. EXCAVATIONS SHALL BE IN COMPLIANCE WITH ACCEPTED HSSE PLAN AND OSHA 29 CFR 1926 SUBPART P.
8. SEE DWG. C-101 FOR LINE (L) AND CURVE (C) DATA TABLES.
9. CURVE EMBANKMENT AND WIDENING REQUIRED FOR CURVES WITH RADIUS <160 FEET, SEE DWG. C-101.

Call before you Dig.
1-800-227-2600
UNDERGROUND SERVICE (USA)

| REVISIONS NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| | | | | | |

**FINAL DESIGN FOR CONSTRUCTION**

ENGINEER

PREPARED BY:
Brown AND Caldwell
3264 GONI ROAD, SUITE 153
CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118

| | | |
|---|---|---|
| DESIGNED | RDH | 5/10 |
| DRAWN | RDH | 5/10 |
| CHECKED | RAM | 5/10 |
| APPROVED | RAM | 5/10 |
| APPROVED | | |
| APPROVED | | |

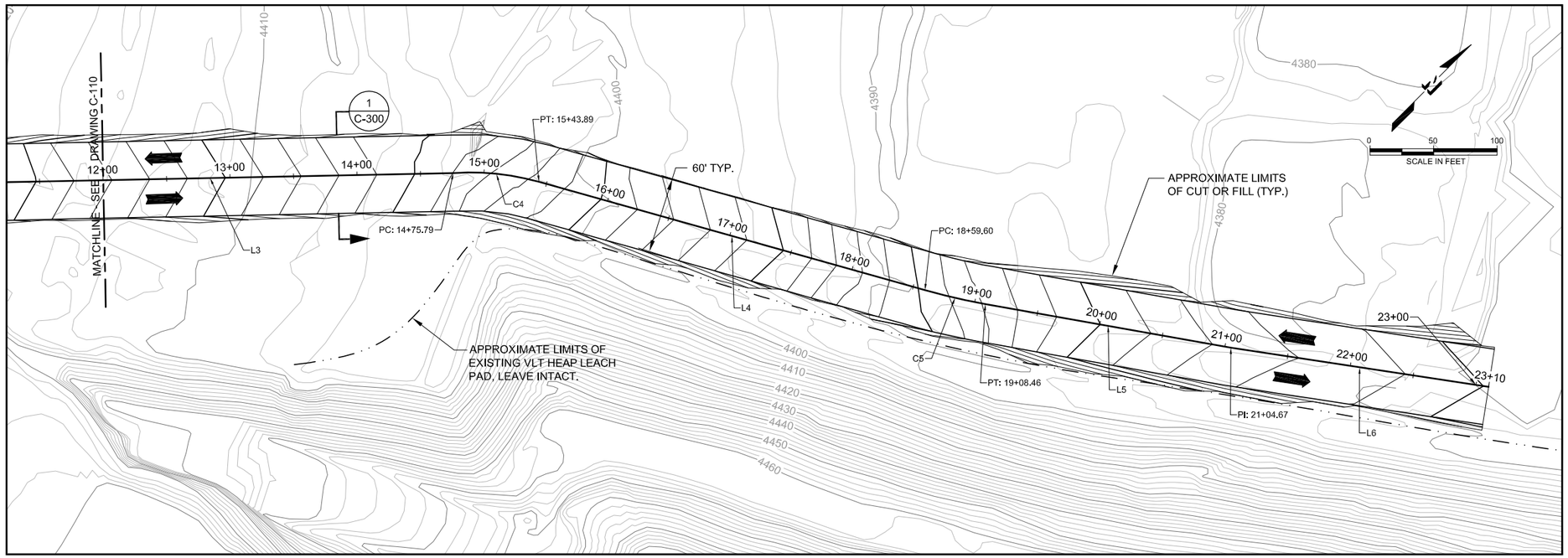
PREPARED FOR:
Atlantic Richfield Company

REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

TITLE
**CIVIL**
**ALIGNMENT 1 - SHEET 1 - PLAN AND PROFILE**
**2-WAY ROAD FROM NORTH VLT BORROW SOURCE TO THUMB POND (NVLT)**

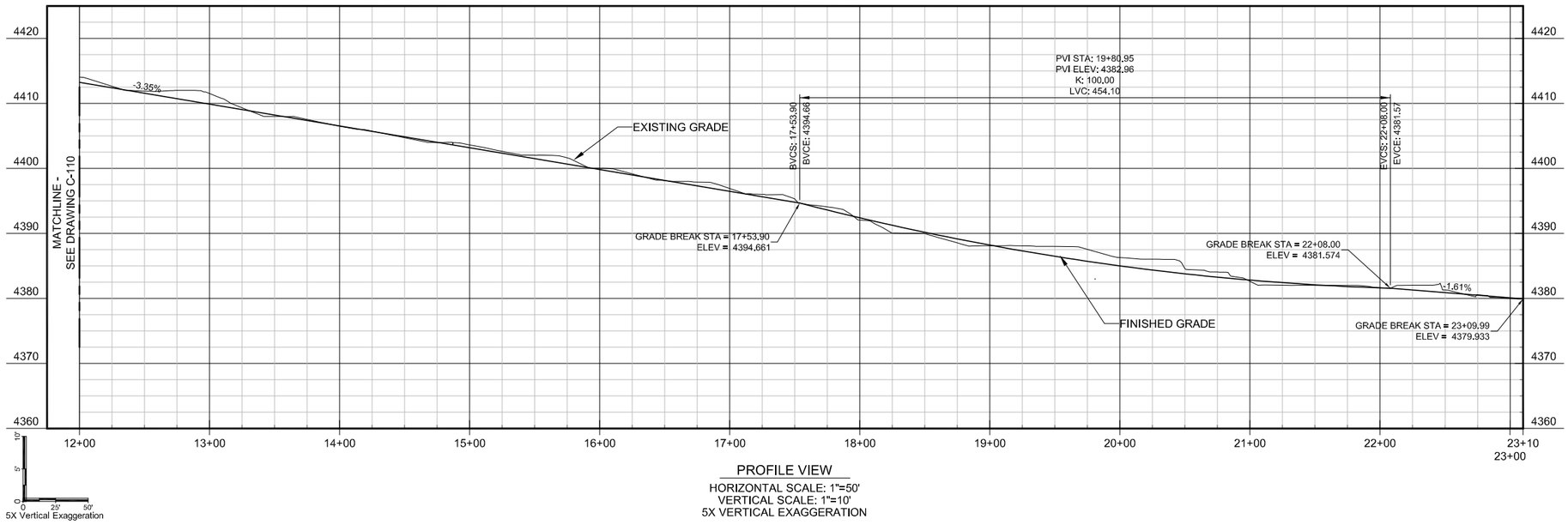
SCALE AS SHOWN — LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY)
REVISION

DRAWING NUMBER: **138555-C-110**
SHEET NUMBER: **15 OF 27**




NVLT HAUL ROAD SPEED LIMIT IS 20 MPH.

PLAN VIEW
SCALE: 1"=50'




PROFILE VIEW
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=10'
5X VERTICAL EXAGGERATION

NOTES:

1. UNLESS SPECIFIED, GENERAL MINE SITE SPEED LIMIT IS 25 MPH.
2. IMPLEMENT APPROVED TRAFFIC MANAGEMENT PLAN PRIOR TO ACCESSING SITE WORK AREAS.
3. DUST MITIGATION TO BE IMPLEMENTED DURING ALL PROJECT WORK.
4. CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF SIGNIFICANT DIFFERENCES IN PLAN PRIOR TO EXECUTING WORK.
5. CONTRACTOR TO LIMIT EQUIPMENT RUTTING IN SOFT SEDIMENTS TO LESS THAN 1-INCH. RUTTING GREATER THAN 1-INCH REQUIRES SOIL OR GEOGRID STABILIZATION TO MITIGATE RUTTING CAUSED BY PROPOSED CONSTRUCTION EQUIPMENT.
6. ALL HAUL ROADS TO BE IN COMPLIANCE WITH MSHA 30 CFR 56.9300.
7. EXCAVATIONS SHALL BE IN COMPLIANCE WITH ACCEPTED HSSE PLAN AND OSHA 29 CFR 1926 SUBPART P.
8. SEE DWG. C-101 FOR LINE (L) AND CURVE (C) DATA TABLES.
9. CURVE EMBANKMENT AND WIDENING REQUIRED FOR CURVES WITH RADIUS <160 FEET, SEE DWG. C-101.

Call before you Dig.
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UNDERGROUND SERVICE (USA)

| REVISIONS NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| | | | | | |

**FINAL DESIGN FOR CONSTRUCTION**

ENGINEER


PREPARED BY:
Brown AND Caldwell
3264 GONI ROAD, SUITE 153
CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118


| | | |
|---|---|---|
| DESIGNED | RDH | 5/10 |
| DRAWN | RDH | 5/10 |
| CHECKED | RAM | 5/10 |
| APPROVED | RAM | 5/10 |
| APPROVED | | |
| APPROVED | | |

PREPARED FOR:
Atlantic Richfield Company

REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

TITLE
**CIVIL**
**ALIGNMENT 1 - SHEET 2 - PLAN AND PROFILE**
**2-WAY ROAD FROM NORTH VLT BORROW SOURCE TO THUMB POND (NVLT)**

SCALE AS SHOWN — LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY)
REVISION

DRAWING NUMBER: **138555-C-111**
SHEET NUMBER: **16 OF 27**


Path: P:\Arco-Yerington\Evaporation Pond-Sulfide Tailings\136742 - Year 2009 Files\CAD\C3D\Thumb Pond_Sub-Area A\100% Design\2-Sheets\C-C Filename: 138555-C-111-C3D Plot date: Jun 08, 2010-04:19:14pm CAD User: rhunt

| STATION | DESCRIPTION |
|---|---|
| 0+00 TO 28+22 | TWO WAY HAUL ROAD |
| 28+22 TO 49+85 | ONE WAY HAUL ROAD WITH RETURN MAINTENANCE LANE |
| 49+85 TO 124+19 | ONE WAY HAUL ROAD |
| 124+19 TO 130+61 | ONE WAY HAUL ROAD WITH RETURN MAINTENANCE LANE |

BP: 0+00.00
0+00
PI: 3+36.20
5+00
PI: 9+29.64
10+00
PI: 12+59.14
15+00
PI: 15+49.62
PI: 17+48.52
20+00
PI: 19+00.10
PI: 20+00.00
25+00
30+00
130+61.08
125+00
120+00
115+00
110+00
105+00
100+00
95+00
90+00
85+00
80+00
75+00
70+00
65+00
60+00
55+00
50+00
45+00
40+00
35+00
PI: 43+19.10
PI: 42+59.54
PI: 41+94.14
PI: 41+08.71
PI: 40+28.14
PI: 38+53.20
PI: 37+40.16
PI: 36+41.28
PI: 33+63.29
PI: 32+91.83
PI: 35+46.26
PI: 34+57.37
PI: 39+50.82
PI: 110+18.96
PI: 104+09.57
PI: 107+66.11
PI: 108+79.63
PI: 112+56.48
PI: 113+60.03
PC: 116+33.63
PT: 117+05.73
PC: 118+12.68
PT: 118+30.08
PC: 119+71.95
PT: 119+96.88
PC: 98+62.38
PT: 99+17.82
PC: 89+51.98
PT: 91+08.76
PC: 71+24.67
PT: 73+82.45
PC: 77+48.36
PT: 80+32.34
PC: 81+05.51
PT: 82+51.32
L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12 L13 L14 L15 L16 L17 L18 L19 L20 L21 L22 L23 L24 L25 L26 L27 L28 L29 L31 L32 L33 L34 L35 L36 L37 L38 L39 L40 L41 L42 L43 L44 L45 L46 L47 L48
C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19
1 C-300
2 C-300
3 C-300
3 C-300
MW-15
PA-MW-2S
UW-15
WW-23
WW-10
NVLT EQUIPMENT ACCESS
SOUTH VLT BORROW SOURCE
SEE DWG. C-123 FOR DETAIL IN THIS AREA
SEE DWG. C-124 FOR DETAIL IN THIS AREA
ROAD CLOSED DURING CONSTRUCTION
WIDEN ROAD PER SECTION 3/C-300 APPROX. STA. 33+30 TO 45+50
ROAD CLOSED DURING CONSTRUCTION
SEE DWG. C-122 FOR DETAIL IN THIS AREA
MINE SITE BOUNDARY
TO CONTRACTOR STAGING AREA
SUB-AREA A STAGING AREA
SUB-AREA A
0 200 400
SCALE IN FEET

Path: P:\Arco-Yerington\Evaporation Pond-Sulfide Tailings\136742 - Year 2009 Files\CAD\C3D\Thumb Pond_Sub-Area A\100% Design\2-Sheets\C-C CAD User: rhunt Filename: 138555-C-120-C3D Plot date: Jun 16, 2010-08:42:42am

| NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| REVISIONS | | | | | |

**FINAL DESIGN FOR CONSTRUCTION**

ENGINEER

PREPARED BY:
Brown AND Caldwell
3264 GONI ROAD, SUITE 153
CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118

| | | |
|---|---|---|
| DESIGNED | RDH | 6/10 |
| DRAWN | RDH | 6/10 |
| CHECKED | RAM | 6/10 |
| APPROVED | RAM | 6/10 |
| APPROVED | | |
| APPROVED | | |

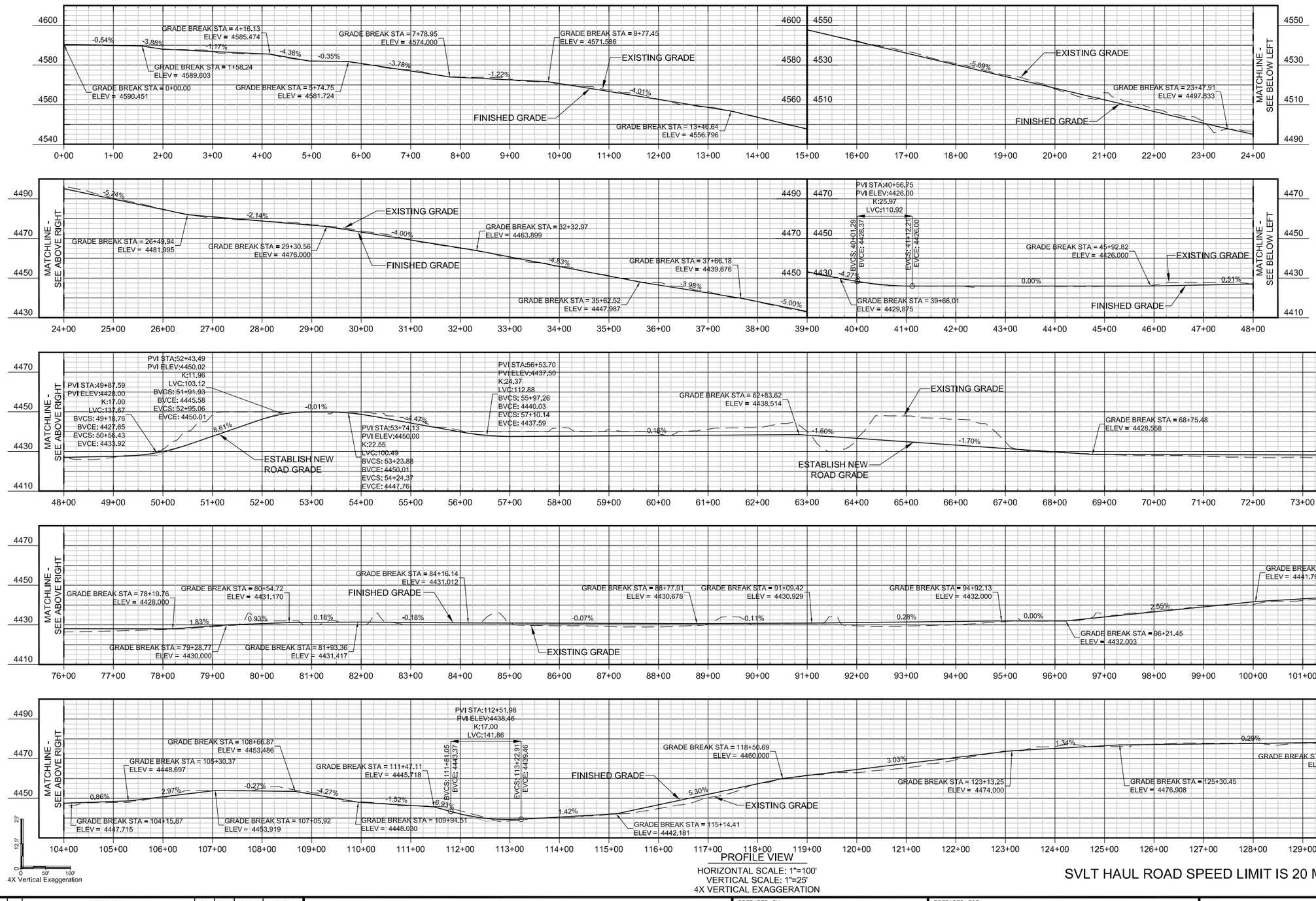
PREPARED FOR:
Atlantic Richfield Company

REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

TITLE
**CIVIL**
**ALIGNMENT 2 - SHEET 1 - OVERALL PLAN LOOP ROAD TO SUB-AREA A (SVLT)**

SCALE 1" = 200' | LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY) | REVISION

DRAWING NUMBER: **138555-C-120**
SHEET NUMBER: **17 OF 27**




PROFILE VIEW
HORIZONTAL SCALE: 1"=100'
VERTICAL SCALE: 1"=25'
4X VERTICAL EXAGGERATION

NOTES:

1. UNLESS SPECIFIED, GENERAL MINE SITE SPEED LIMIT IS 25 MPH.
2. IMPLEMENT APPROVED TRAFFIC MANAGEMENT PLAN PRIOR TO ACCESSING SITE WORK AREAS.
3. DUST MITIGATION TO BE IMPLEMENTED DURING ALL PROJECT WORK.
4. CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF SIGNIFICANT DIFFERENCES IN PLAN PRIOR TO EXECUTING WORK.
5. CONTRACTOR TO LIMIT EQUIPMENT RUTTING IN SOFT SEDIMENTS TO LESS THAN 1-INCH. RUTTING GREATER THAN 1-INCH REQUIRES SOIL OR GEOGRID STABILIZATION TO MITIGATE RUTTING CAUSED BY PROPOSED CONSTRUCTION EQUIPMENT.
6. ALL HAUL ROADS TO BE IN COMPLIANCE WITH MSHA 30 CFR 56.9300.
7. EXCAVATIONS SHALL BE IN COMPLIANCE WITH ACCEPTED HSSE PLAN AND OSHA 29 CFR 1926 SUBPART P.
8. SEE DWG. C-101 FOR LINE (L) AND CURVE (C) DATA TABLES.
9. CURVE EMBANKMENT AND WIDENING REQUIRED FOR CURVES WITH RADIUS <160 FEET, SEE DWG. C-101.

SVLT HAUL ROAD SPEED LIMIT IS 20 MPH.



| NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| | | | | | |

REVISIONS

**FINAL DESIGN FOR CONSTRUCTION**

ENGINEER

PREPARED BY:
Brown AND Caldwell
3264 GONI ROAD, SUITE 153
CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118

| | | |
|---|---|---|
| DESIGNED | RDH | 6/10 |
| DRAWN | RDH | 6/10 |
| CHECKED | RAM | 6/10 |
| APPROVED | RAM | 6/10 |
| APPROVED | | |
| APPROVED | | |

PREPARED FOR:
Atlantic Richfield Company

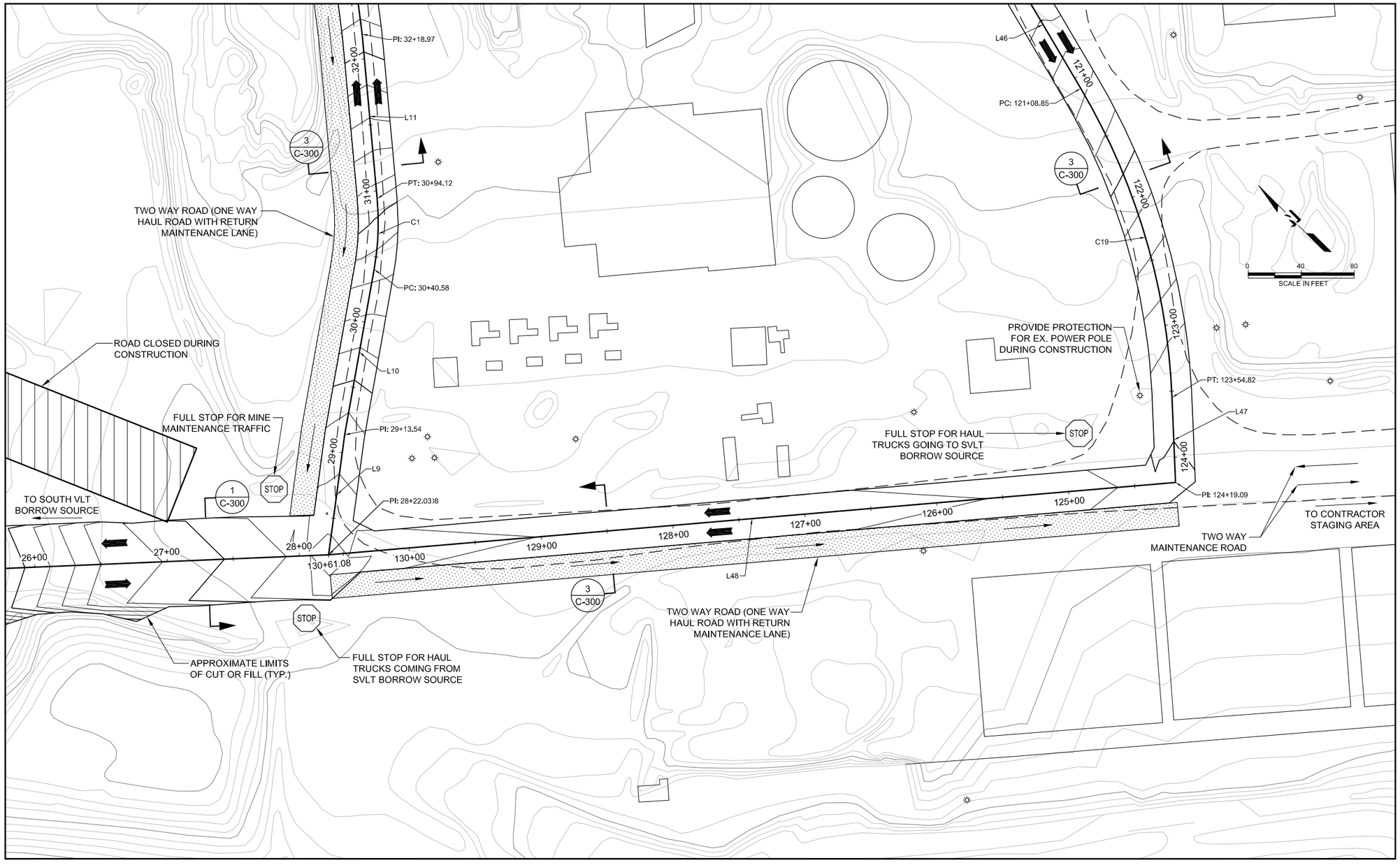
REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

TITLE
**CIVIL**
**ALIGNMENT 2 - SHEET 2 - OVERALL PROFILE LOOP ROAD TO SUB-AREA A (SVLT)**

SCALE AS SHOWN — LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY) — REVISION

DRAWING NUMBER: **138555-C-121**

SHEET NUMBER: **18 OF 27**




PLAN VIEW
SCALE: 1"=40'

NOTES:

1. UNLESS SPECIFIED, GENERAL MINE SITE SPEED LIMIT IS 25 MPH.
2. IMPLEMENT APPROVED TRAFFIC MANAGEMENT PLAN PRIOR TO ACCESSING SITE WORK AREAS.
3. DUST MITIGATION TO BE IMPLEMENTED DURING ALL PROJECT WORK.
4. CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF SIGNIFICANT DIFFERENCES IN PLAN PRIOR TO EXECUTING WORK.
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8. SEE DWG. C-101 FOR LINE (L) AND CURVE (C) DATA TABLES.
9. CURVE EMBANKMENT AND WIDENING REQUIRED FOR CURVES WITH RADIUS <160 FEET, SEE DWG. C-101.

SVLT HAUL ROAD SPEED LIMIT IS 20 MPH.

Call before you Dig.
1-800-227-2600
UNDERGROUND SERVICE (USA)

| REVISIONS NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| | | | | | |

**FINAL DESIGN FOR CONSTRUCTION**

ENGINEER

PREPARED BY:
Brown AND Caldwell
3264 GONI ROAD, SUITE 153
CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118

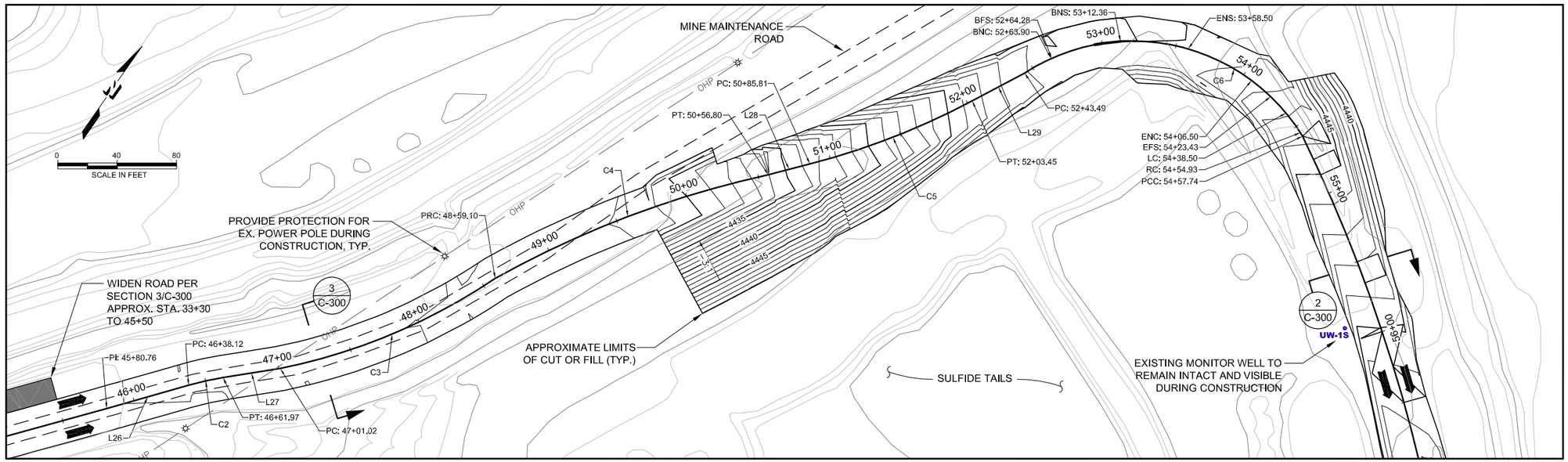
| | | |
|---|---|---|
| DESIGNED | RDH | 6/10 |
| DRAWN | RDH | 6/10 |
| CHECKED | RAM | 6/10 |
| APPROVED | RAM | 6/10 |
| APPROVED | | |
| APPROVED | | |

PREPARED FOR:
Atlantic Richfield Company

REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

TITLE
**CIVIL**
**ALIGNMENT 2 - SHEET 3 - DETAILED PLAN LOOP ROAD TO SUB-AREA A (SVLT)**

SCALE AS SHOWN — LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY)
REVISION
DRAWING NUMBER: **138555-C-122**
SHEET NUMBER: **19 OF 27**

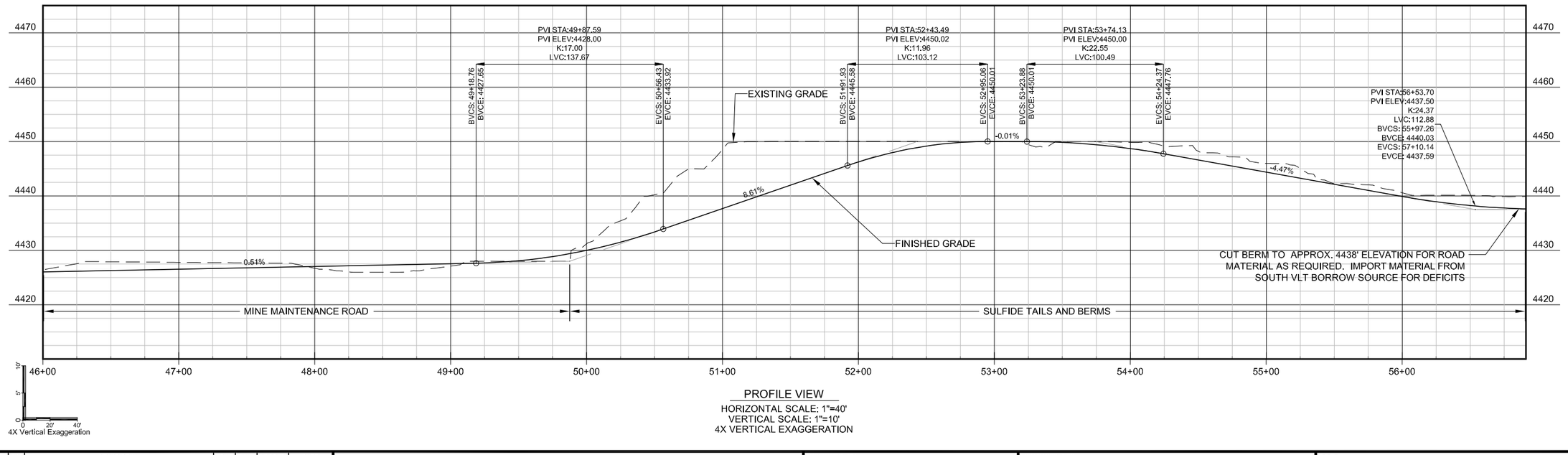



PLAN VIEW
SCALE: 1"=40'

SVLT HAUL ROAD SPEED LIMIT IS 20 MPH.

NOTES:

1. UNLESS SPECIFIED, GENERAL MINE SITE SPEED LIMIT IS 25 MPH.
2. IMPLEMENT APPROVED TRAFFIC MANAGEMENT PLAN PRIOR TO ACCESSING SITE WORK AREAS.
3. DUST MITIGATION TO BE IMPLEMENTED DURING ALL PROJECT WORK.
4. CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF SIGNIFICANT DIFFERENCES IN PLAN PRIOR TO EXECUTING WORK.
5. CONTRACTOR TO LIMIT EQUIPMENT RUTTING IN SOFT SEDIMENTS TO LESS THAN 1-INCH. RUTTING GREATER THAN 1-INCH REQUIRES SOIL OR GEOGRID STABILIZATION TO MITIGATE RUTTING CAUSED BY PROPOSED CONSTRUCTION EQUIPMENT.
6. ALL HAUL ROADS TO BE IN COMPLIANCE WITH MSHA 30 CFR 56.9300.
7. EXCAVATIONS SHALL BE IN COMPLIANCE WITH ACCEPTED HSSE PLAN AND OSHA 29 CFR 1926 SUBPART P.
8. SEE DWG. C-101 FOR LINE (L) AND CURVE (C) DATA TABLES.
9. CURVE EMBANKMENT AND WIDENING REQUIRED FOR CURVES WITH RADIUS <160 FEET, SEE DWG. C-101.




PROFILE VIEW
HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=10'
4X VERTICAL EXAGGERATION

Call before you Dig.
1-800-227-2600
UNDERGROUND SERVICE (USA)

| REVISIONS NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| | | | | | |

**FINAL DESIGN FOR CONSTRUCTION**

ENGINEER

PREPARED BY:
Brown AND Caldwell
3264 GONI ROAD, SUITE 153
CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118

| | | |
|---|---|---|
| DESIGNED | RDH | 6/10 |
| DRAWN | RDH | 6/10 |
| CHECKED | RAM | 6/10 |
| APPROVED | RAM | 6/10 |
| APPROVED | | |
| APPROVED | | |

PREPARED FOR:
Atlantic Richfield Company

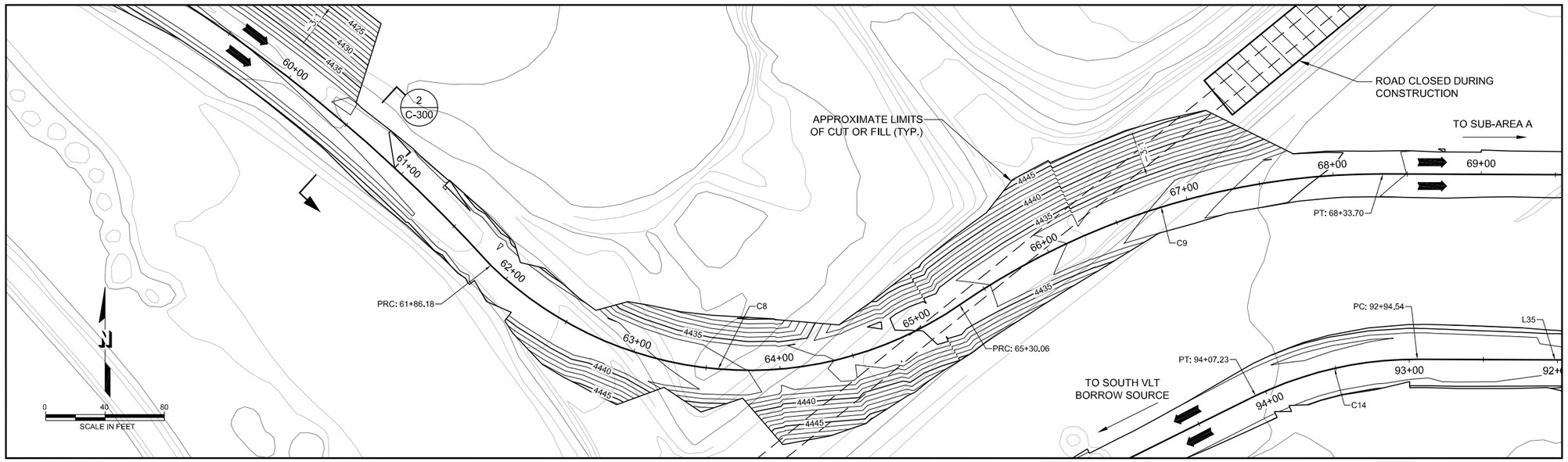
REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

TITLE
**CIVIL**
**ALIGNMENT 2 - SHEET 4 - DETAILED PLAN AND PROFILE LOOP ROAD TO SUB-AREA A (SVLT)**

SCALE AS SHOWN — LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY) — REVISION

DRAWING NUMBER: **138555-C-123**

SHEET NUMBER: **20 OF 27**

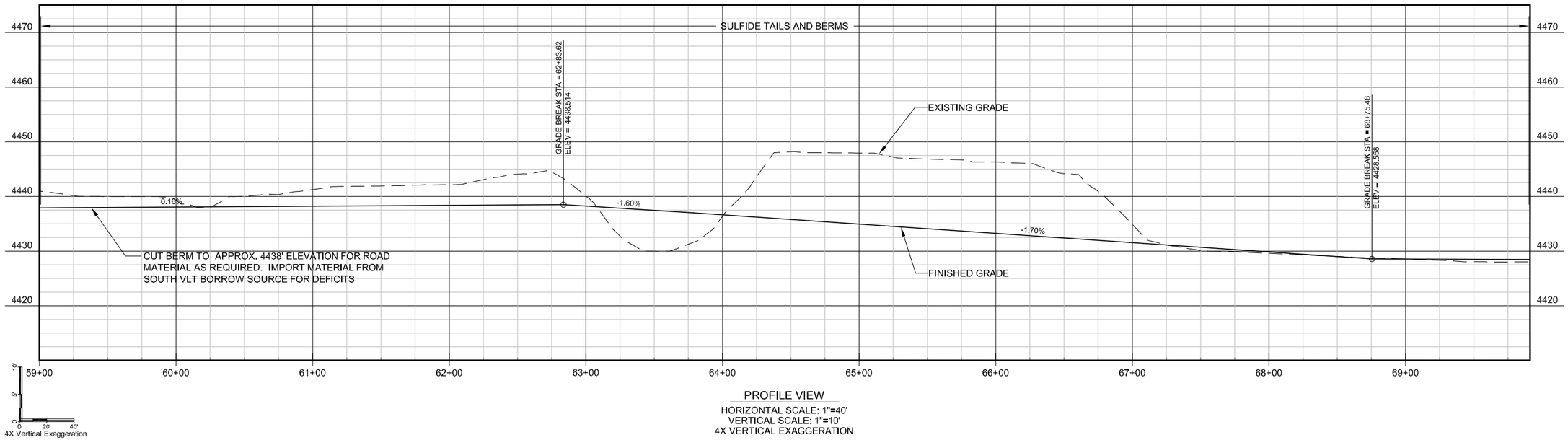



PLAN VIEW
SCALE: 1"=40'

NOTES:

1. UNLESS SPECIFIED, GENERAL MINE SITE SPEED LIMIT IS 25 MPH.
2. IMPLEMENT APPROVED TRAFFIC MANAGEMENT PLAN PRIOR TO ACCESSING SITE WORK AREAS.
3. DUST MITIGATION TO BE IMPLEMENTED DURING ALL PROJECT WORK.
4. CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF SIGNIFICANT DIFFERENCES IN PLAN PRIOR TO EXECUTING WORK.
5. CONTRACTOR TO LIMIT EQUIPMENT RUTTING IN SOFT SEDIMENTS TO LESS THAN 1-INCH. RUTTING GREATER THAN 1-INCH REQUIRES SOIL OR GEOGRID STABILIZATION TO MITIGATE RUTTING CAUSED BY PROPOSED CONSTRUCTION EQUIPMENT.
6. ALL HAUL ROADS TO BE IN COMPLIANCE WITH MSHA 30 CFR 56.9300.
7. EXCAVATIONS SHALL BE IN COMPLIANCE WITH ACCEPTED HSSE PLAN AND OSHA 29 CFR 1926 SUBPART P.
8. SEE DWG. C-101 FOR LINE (L) AND CURVE (C) DATA TABLES.
9. CURVE EMBANKMENT AND WIDENING REQUIRED FOR CURVES WITH RADIUS <160 FEET, SEE DWG. C-101.

SVLT HAUL ROAD SPEED LIMIT IS 20 MPH.




PROFILE VIEW
HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=10'
4X VERTICAL EXAGGERATION

Call before you Dig.
1-800-227-2600
UNDERGROUND SERVICE (USA)

| REVISIONS NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| | | | | | |

**FINAL DESIGN FOR CONSTRUCTION**

ENGINEER

PREPARED BY:
Brown AND Caldwell
3264 GONI ROAD, SUITE 153
CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118

| | | |
|---|---|---|
| DESIGNED | RDH | 6/10 |
| DRAWN | RDH | 6/10 |
| CHECKED | RAM | 6/10 |
| APPROVED | RAM | 6/10 |
| APPROVED | | |
| APPROVED | | |

PREPARED FOR:
Atlantic Richfield Company

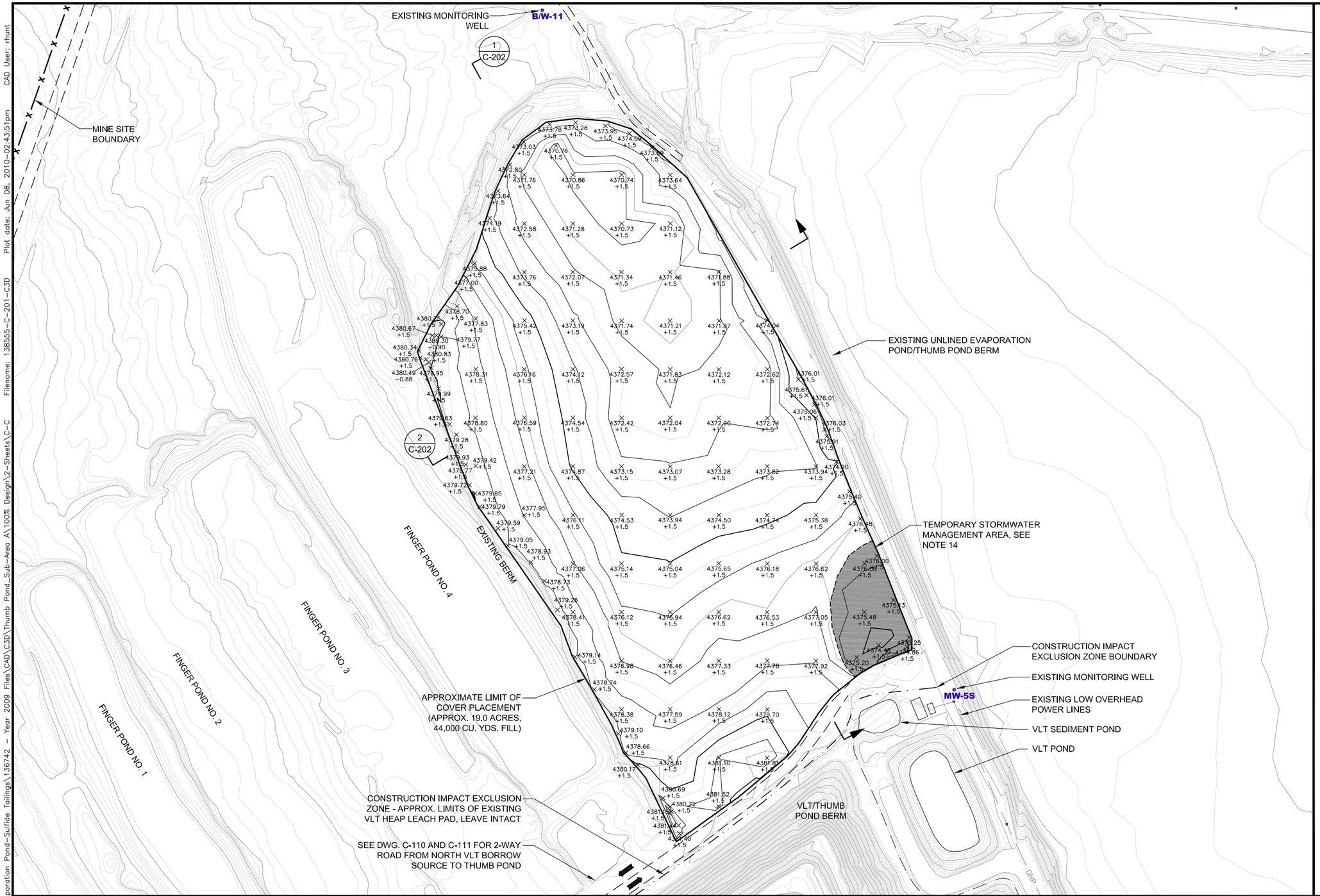
REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

TITLE
**CIVIL**
**ALIGNMENT 2 - SHEET 5 - DETAILED PLAN AND PROFILE LOOP ROAD TO SUB-AREA A (SVLT)**

SCALE AS SHOWN — LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY) — REVISION

DRAWING NUMBER: **138555-C-124**

SHEET NUMBER: **21 OF 27**




NOTES:

1. MINE SITE SPEED LIMIT 25 MPH.
2. IMPLEMENT APPROVED TRAFFIC MANAGEMENT. PLAN PRIOR TO ACCESSING SITE WORK AREAS.
3. DUST MITIGATION TO BE IMPLEMENTED DURING ALL PROJECT WORK.
4. CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF SIGNIFICANT DIFFERENCES IN PLAN IN WRITING PRIOR TO EXECUTING WORK.
5. CONTRACTOR TO LIMIT EQUIPMENT RUTTING IN SOFT SEDIMENTS TO LESS THAN 1-INCH. RUTTING GREATER THAN 1-INCH REQUIRES SOIL OR GEOGRID STABILIZATION TO MITIGATE RUTTING OF PROPOSED CONSTRUCTION EQUIPMENT.
6. ALL HAUL ROADS TO BE IN COMPLIANCE WITH MSHA 30 CFR 56.9300.
7. EXCAVATIONS SHALL BE IN COMPLIANCE WITH ACCEPTED HSSE PLAN AND OSHA 29 CFR 1926 SUBPART P.
8. DESIGN FUNCTION: DUST MITIGATION COVER.
9. ELEVATIONS ARE APPROXIMATELY 18-INCHES AVERAGE ABOVE BASE SURVEY AS SHOWN ON C-011.
10. COVER TO BE PLACED AT MINIMUM 85% STANDARD PROCTOR TO ELEVATION SPECIFIED. VERIFY BY SURVEY ONLY.
11. SECTION LINES ARE APPROXIMATE, COVER THICKNESS TO BE DETERMINED PER PLAN SPECIFICATIONS DESCRIBED IN NOTES 8 AND 9.
12. FILL AREA IS APPROXIMATELY 19 ACRES.
13. CONTOURS REFLECT POINT ELEVATION DATA.
14. ADDITIONAL TEMPORARY STORMWATER MANAGEMENT AREAS MAY BE CONSTRUCTED TO FACILITATE SCHEDULE WITH APPROVAL OF ENGINEER. CONTRACTOR RESPONSIBLE FOR REMOVING OR INCORPORATING BERM CONTROLS INTO COVER MATERIALS PER SPECIFICATION AT COMPLETION OF FILL PLACEMENT.

Path: P:\Arco-Yerington\Evaporation Pond-Sulfide Tailings\136742 - Year 2009 Files\CAD\C3D\Thumb Pond_Sub-Area A\100% Design\2-Sheets\C-C Filename: 138555-C-201-C3D Plot date: Jun 08, 2010-02:43:51pm CAD User: rhunt

| REVISIONS NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| | | | | | |

**FINAL DESIGN FOR CONSTRUCTION**

ENGINEER


PREPARED BY:
Brown AND Caldwell
3264 GONI ROAD, SUITE 153
CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118


| | | |
|---|---|---|
| DESIGNED | RDH | 6/10 |
| DRAWN | RDH | 6/10 |
| CHECKED | RAM | 6/10 |
| APPROVED | RAM | 6/10 |
| APPROVED | | |
| APPROVED | | |

PREPARED FOR:
Atlantic Richfield Company

REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

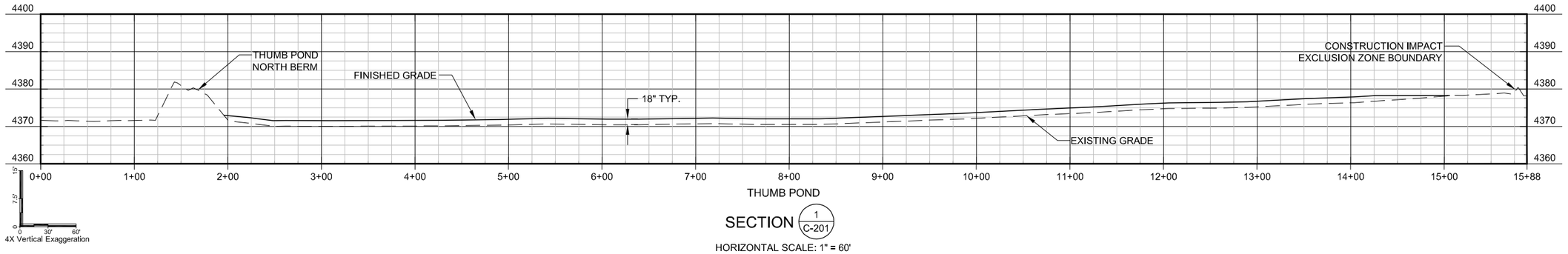
TITLE
**CIVIL**
**THUMB POND INTERIM COVER BUILD OUT**

SCALE 1" = 100' (LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY))

REVISION

DRAWING NUMBER
**136742-C-201**

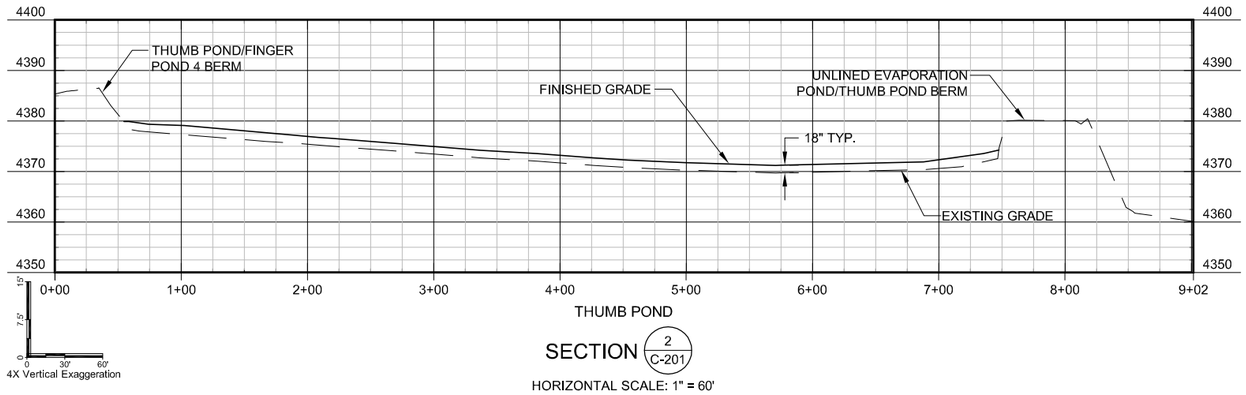
SHEET NUMBER
**22 OF 27**




THUMB POND

SECTION 1 / C-201

HORIZONTAL SCALE: 1" = 60'




THUMB POND

SECTION 2 / C-201

HORIZONTAL SCALE: 1" = 60'

| NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| | | | | | |

REVISIONS

**FINAL DESIGN FOR CONSTRUCTION**

ENGINEER


PREPARED BY:

Brown AND Caldwell

3264 GONI ROAD, SUITE 153
CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118


| | | |
|---|---|---|
| DESIGNED | RDH | 6/10 |
| DRAWN | RDH | 6/10 |
| CHECKED | RAM | 6/10 |
| APPROVED | RAM | 6/10 |
| APPROVED | | |
| APPROVED | | |

PREPARED FOR:

Atlantic Richfield Company

REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

TITLE

**CIVIL**

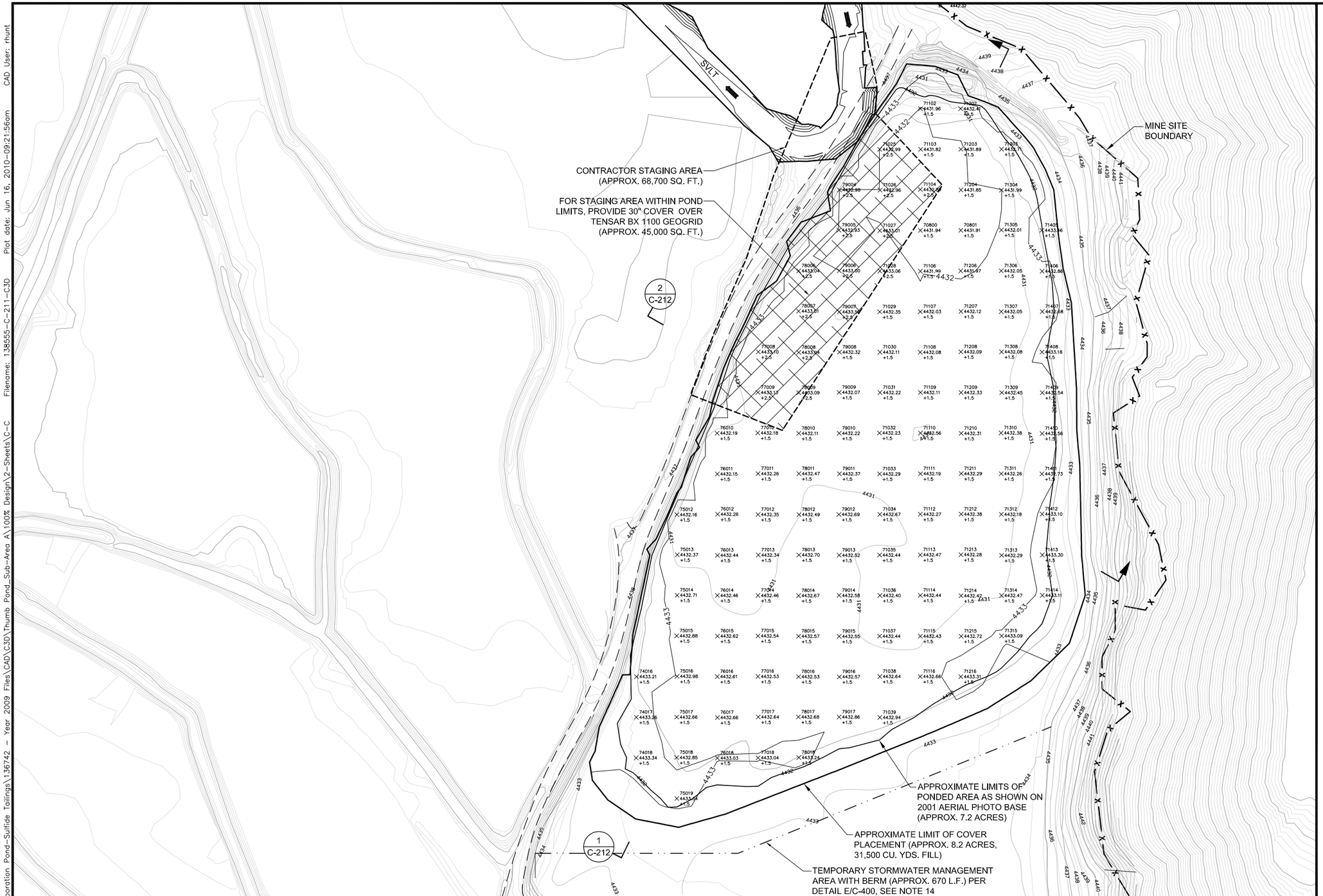
**THUMB POND**
**INTERIM COVER BUILD OUT SECTIONS**

SCALE AS SHOWN — LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY)

REVISION

DRAWING NUMBER: **136742-C-202**

SHEET NUMBER: **23 OF 27**




NOTES:

1. MINE SITE SPEED LIMIT 25 MPH.
2. IMPLEMENT APPROVED TRAFFIC MANAGEMENT. PLAN PRIOR TO ACCESSING SITE WORK AREAS.
3. DUST MITIGATION TO BE IMPLEMENTED DURING ALL PROJECT WORK.
4. CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF SIGNIFICANT DIFFERENCES IN PLAN IN WRITING PRIOR TO EXECUTING WORK.
5. CONTRACTOR TO LIMIT EQUIPMENT RUTTING IN SOFT SEDIMENTS TO LESS THAN 1-INCH. RUTTING GREATER THAN 1-INCH REQUIRES SOIL OR GEOGRID STABILIZATION TO MITIGATE RUTTING OF PROPOSED CONSTRUCTION EQUIPMENT.
6. ALL HAUL ROADS TO BE IN COMPLIANCE WITH MSHA 30 CFR 56.9300.
7. EXCAVATIONS SHALL BE IN COMPLIANCE WITH ACCEPTED HSSE PLAN AND OSHA 29 CFR 1926 SUBPART P.
8. DESIGN FUNCTION: DUST MITIGATION COVER.
9. ELEVATIONS ARE APPROXIMATELY 18-INCHES AVERAGE ABOVE BASE SURVEY AS SHOWN ON C-012 EXCEPT FOR REINFORCED AREA SHOWN.
10. COVER TO BE PLACED AT MINIMUM 85% STANDARD PROCTOR TO ELEVATION SPECIFIED. VERIFY BY SURVEY ONLY. COMPACTION SPECIFICATION APPLICABLE TO TOP 3 TO 6 INCHES OF COVER ONLY.
11. SECTION LINES ARE APPROXIMATE, COVER THICKNESS TO BE DETERMINED PER PLAN SPECIFICATIONS DESCRIBED IN NOTES 8 AND 9.
12. FILL AREA IS APPROXIMATELY 8 ACRES.
13. CONTOURS REFLECT POINT ELEVATION DATA.
14. ADDITIONAL TEMPORARY STORMWATER MANAGEMENT AREAS MAY BE CONSTRUCTED TO FACILITATE SCHEDULE WITH APPROVAL OF ENGINEER. CONTRACTOR RESPONSIBLE FOR REMOVING OR INCORPORATING BERM CONTROLS INTO COVER MATERIALS PER SPECIFICATION AT COMPLETION OF FILL PLACEMENT.

N

0 60' 120'
SCALE IN FEET

| REVISIONS NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| | | | | | |

**FINAL DESIGN FOR CONSTRUCTION**

ENGINEER

PREPARED BY:
Brown AND Caldwell
3264 GONI ROAD, SUITE 153
CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118

| | | |
|---|---|---|
| DESIGNED | RDH | 6/10 |
| DRAWN | RDH | 6/10 |
| CHECKED | RAM | 6/10 |
| APPROVED | RAM | 6/10 |
| APPROVED | | |
| APPROVED | | |

PREPARED FOR:
Atlantic Richfield Company

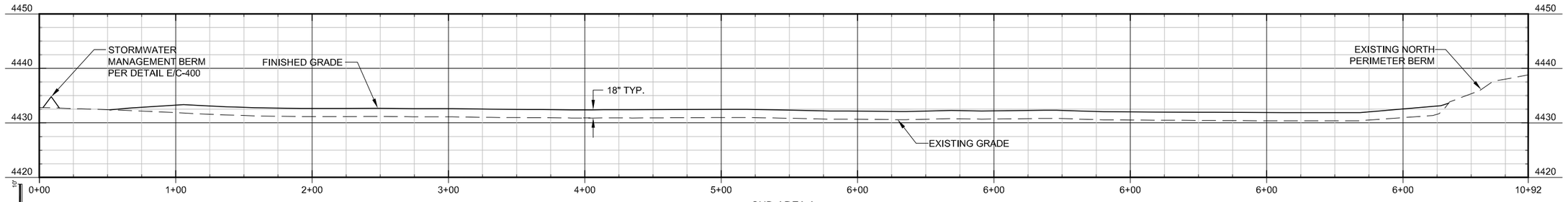
REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

TITLE
**CIVIL**
**SUB-AREA A**
**INTERIM COVER BUILD OUT**

SCALE 1" = 60' — LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY) — REVISION

DRAWING NUMBER: **136742-C-211**

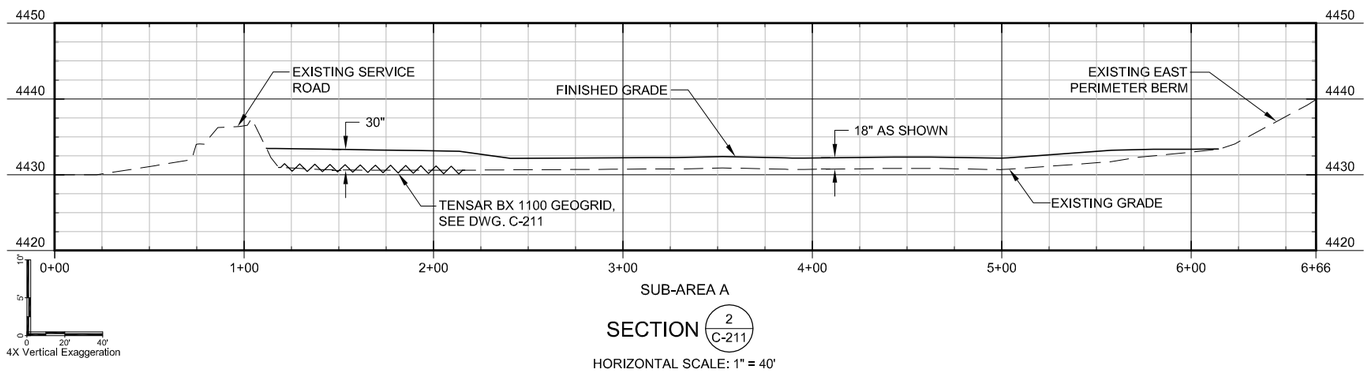
SHEET NUMBER: **24 OF 27**




SUB-AREA A

SECTION 1 / C-211

HORIZONTAL SCALE: 1" = 40'




SUB-AREA A

SECTION 2 / C-211

HORIZONTAL SCALE: 1" = 40'

| NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| | | | | | |

REVISIONS

**FINAL DESIGN FOR CONSTRUCTION**

ENGINEER

PREPARED BY:

Brown AND Caldwell

3264 GONI ROAD, SUITE 153
CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118

| | | |
|---|---|---|
| DESIGNED | RDH | 6/10 |
| DRAWN | RDH | 6/10 |
| CHECKED | RAM | 6/10 |
| APPROVED | RAM | 6/10 |
| APPROVED | | |
| APPROVED | | |

PREPARED FOR:

Atlantic Richfield Company

REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

TITLE

**CIVIL**

**SUB-AREA A**
**INTERIM COVER BUILD OUT SECTIONS**

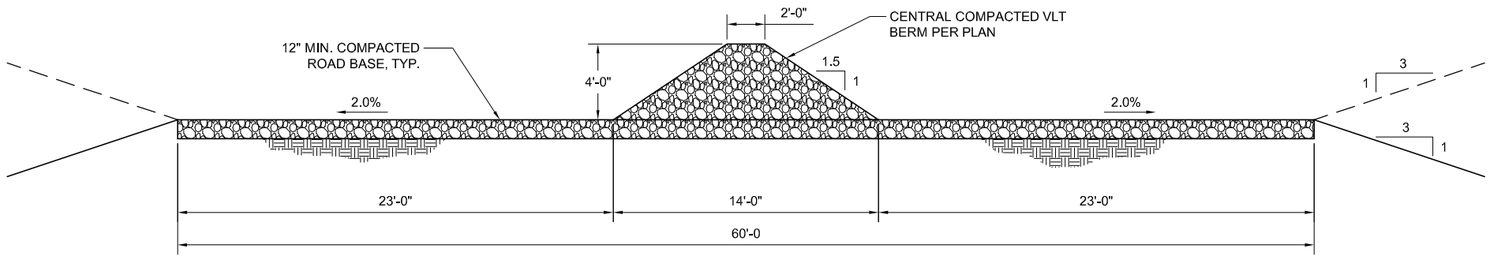
SCALE AS SHOWN — LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY)

REVISION

DRAWING NUMBER: **136742-C-212**

SHEET NUMBER: **25 OF 27**

Path: P:\Arco-Yerington\Evaporation Pond-Sulfide Tailings\136742 - Year 2009 Files\CAD\C3D\Thumb Pond_Sub-Area A\100% Design\2-Sheets\C-C Filename: 138555-C-212-C3D Plot date: Jun 08, 2010-02:58:37pm CAD User: rhunt



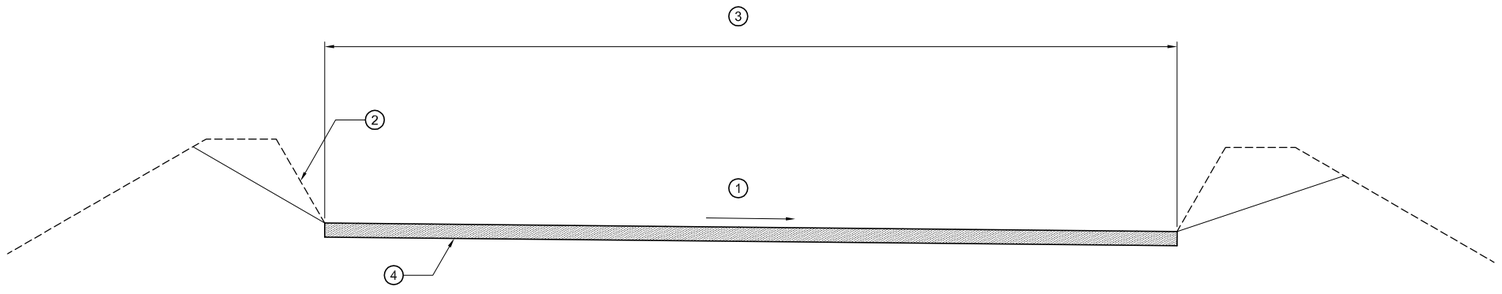

2-WAY HAUL ROAD

SECTION 1 / VAR

SCALE: 1/4" = 1'-0"

NOTES:

1. UTILIZE EXISTING ROAD COARSE GRAINED MATERIALS AS BASE MATERIAL. USE VLT MATERIAL AS REQUIRED FOR FILL COMPACTED IN 10 INCH LIFTS TO 90%, MODIFIED MDD WITHIN 2% OF OPTIMUM MOISTURE. PROVIDE MINIMUM 12 INCH VLT ROAD BASE OVER COMPACTED FINE GRAINED MATERIALS.



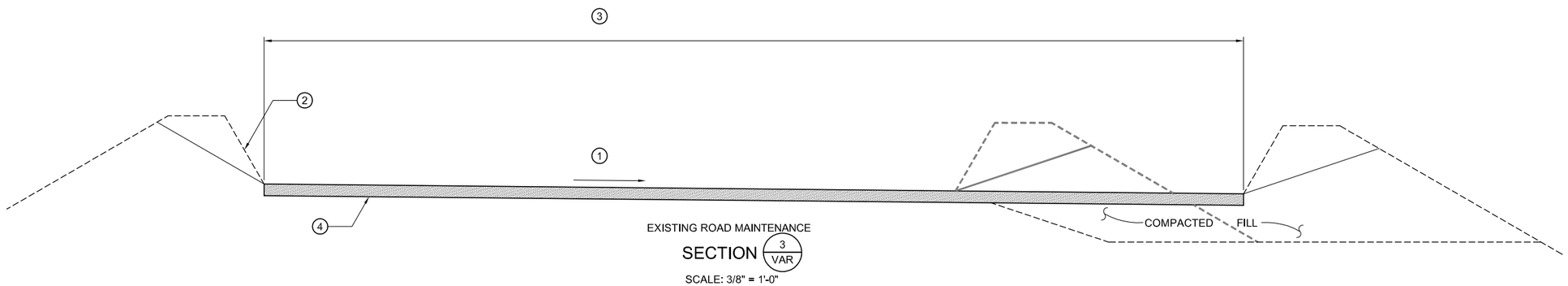

1-WAY HAUL ROAD

SECTION 2 / VAR

SCALE: 3/8" = 1'-0"

NOTES:

1. GRADE / MAINTAIN EXISTING ROAD GRADES TO MAINTAIN DRAINAGE. MAINTAIN EXISTING CROSS DRAINAGE GRADE. PERFORM DUST MITIGATION PER APPROVED PLAN.
2. PROVIDE BERMS AND SLOPES AS REQUIRED FOR EQUIPMENT UTILIZING ACCESS ROADS PER MSHA 30.CFR.56.9300.
3. EXISTING ROADWAY TRAVELWAYS SHALL BE GREATER THAN 30 FEET FOR ONE WAY TRAVELWAYS AND 60 FEET FOR TWO WAY TRAVELWAYS.
4. UTILIZE EXISTING ROAD COARSE GRAINED MATERIALS AS BASE MATERIAL. USE VLT MATERIAL AS REQUIRED FOR FILL COMPACTED IN 10 INCH LIFTS TO 90%, MODIFIED MDD WITHIN 2% OF OPTIMUM MOISTURE. PROVIDE MINIMUM 12 INCH VLT ROAD BASE OVER COMPACTED FINE GRAINED MATERIALS.
5. SECTION FOR HAUL ROAD ONLY, SEE COVER PLAN SHEET FOR THICKNESS REQUIREMENTS IN COVER AREA.




EXISTING ROAD MAINTENANCE

SECTION 3 / VAR

SCALE: 3/8" = 1'-0"

NOTES:

1. GRADE / MAINTAIN EXISTING ROAD GRADES TO MAINTAIN DRAINAGE. MAINTAIN EXISTING CROSS DRAINAGE GRADE. PERFORM DUST MITIGATION PER APPROVED PLAN.
2. MAINTAIN BERMS AND SLOPES AS REQUIRED FOR EQUIPMENT UTILIZING ACCESS ROADS PER MSHA 30.CFR.56.9300.
3. EXISTING ROADWAY TRAVELWAYS SHALL BE GREATER THAN 30 FEET FOR ONE WAY TRAVELWAYS AND 60 FEET FOR TWO WAY TRAVELWAYS. ONE WAY HAUL ROAD WITH RETURN MAINTENANCE LANE IS 48' (30' + 18') WIDE. WIDEN EXISTING ROAD AS SHOWN ON DWG C-120.
4. UTILIZE EXISTING ROAD MATERIALS AS BASE MATERIAL. USE VLT MATERIAL AS REQUIRED FOR FILL COMPACTED IN 10 INCH LIFTS TO 90%, MODIFIED MDD WITHIN 2% OF OPTIMUM MOISTURE.

REVISIONS

| NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| | | | | | |

**FINAL DESIGN FOR CONSTRUCTION**

ENGINEER

PREPARED BY:
Brown AND Caldwell
3264 GONI ROAD, SUITE 153
CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118

| | | |
|---|---|---|
| DESIGNED | RDH | 5/10 |
| DRAWN | RDH | 5/10 |
| CHECKED | RAM | 5/10 |
| APPROVED | RAM | 5/10 |
| APPROVED | | |
| APPROVED | | |

PREPARED FOR:

Atlantic Richfield Company

REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

TITLE

**CIVIL**

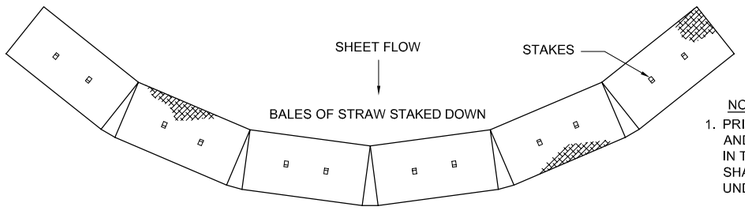
**TYPICAL SECTIONS**

SCALE AS SHOWN — LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY)

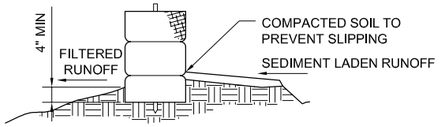
REVISION

DRAWING NUMBER: **138555-C-300**

SHEET NUMBER: **26 OF 27**




SINGLE ROW OF BALES OF STRAW TO BE PLACED
PRIOR TO THE START OF ROUGH GRADING




CROSS-SECTION OF A PROPERLY INSTALLED STRAW BALE

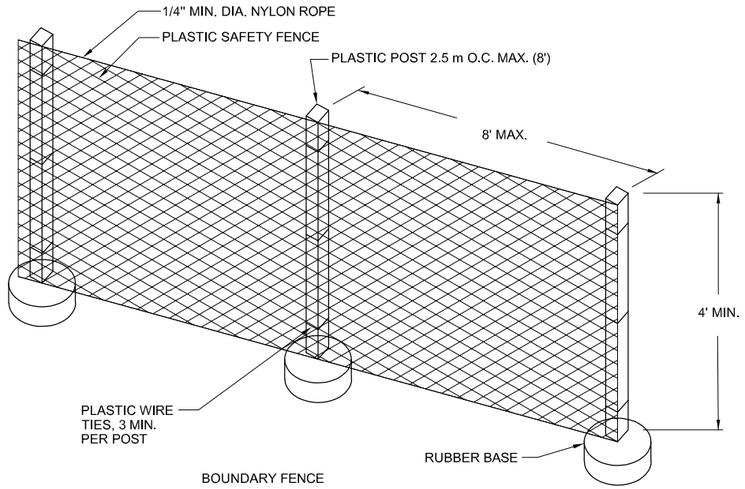
STRAW AND HAY BALE BARRIERS NO. 2

DETAIL A/VAR

NO SCALE

NOTES:

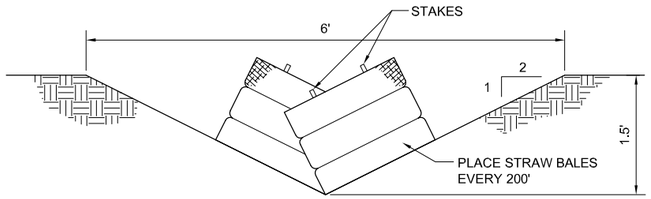
1. PRIOR TO EXCAVATION , THE CLEARING AND GRADING LIMITS SHALL BE STAKED IN THE FIELD. NATIVE GROUND COVER SHALL BE RETAINED AND LEFT UNDISTURBED AS MUCH AS POSSIBLE.
2. EROSION CONTROL FACILITIES MUST BE IN PLACE AND FUNCTIONING PRIOR TO CLEARING AND GRADING.
3. THE DETAILS ON THIS DRAWING ARE FOR REFERENCE USE. SOME OF THE FACILITIES DEPICTED MAY NOT BE NEEDED.
4. THE DETAILS ON THIS DRAWING SHALL APPLY WHERE THE REQUIREMENTS OF THE EROSION CONTROL PLAN NECESSITATE THE USE OF SUCH FACILITIES.
5. SEE ORANGE BOOK SPEC SECTION 200 FOR GRAVEL FILL TYPES.




BOUNDARY FENCE

DETAIL B/VAR

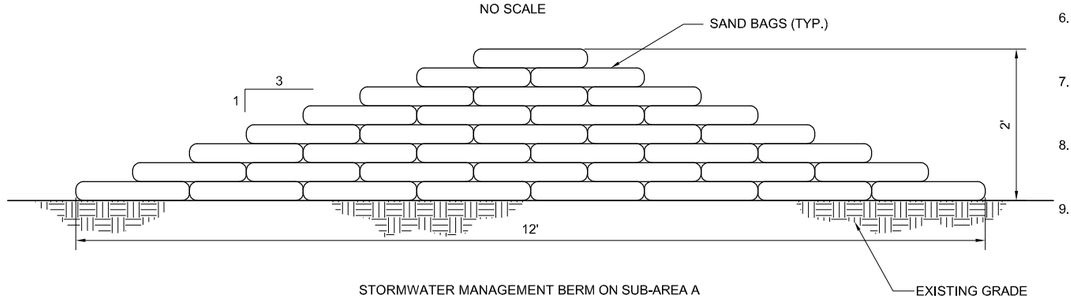
NO SCALE




STORMWATER DITCH WITH STRAW BALE BARRIERS

DETAIL C/VAR

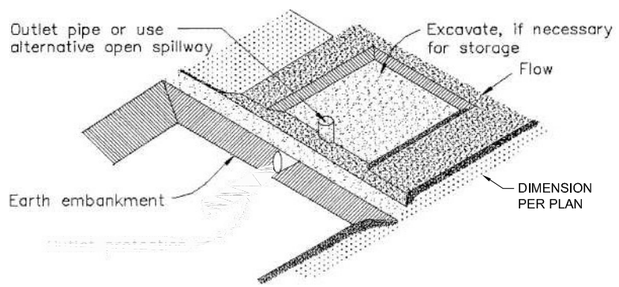
NO SCALE




STORMWATER MANAGEMENT BERM ON SUB-AREA A

DETAIL E/VAR

NO SCALE




SEDIMENT TRAP

DETAIL D/VAR

NO SCALE

## BORROW AREA TEMPORARY EROSION SOIL CONTROL PLAN (TESCP) NOTES:

1. APPROVAL BY PROJECT MANAGER OF A TEMPORARY EROSION/SEDIMENTATION CONTROL PLAN (TESCP) DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS CHANNEL, FACILITIES, UTILITIES, ETC.).
2. THE IMPLEMENTATION OF THESE TESCP PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THESE TESCP FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED.
3. THE BOUNDARIES OF THE CLEARING LIMITS IDENTIFIED ON THESE PLANS SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGS SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
4. THE TESCP FACILITIES SHOWN ON THIS PLAN, SHALL BE IMPLEMENTED IF NECESSARY FOR SEDIMENT CONTROL. THEY MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS.
5. THE TESCP FACILITIES REFERENCED ON THESE PLANS ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE TESCP FACILITIES SHALL BE MAINTAINED AND UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS.
6. THE TESCP FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
7. ANY AREA NEEDING TESCP MEASURE, NOT REQUIRING IMMEDIATE ATTENTION, SHALL BE ADDRESSED WITHIN FIFTEEN (15) DAYS.
8. THE TESCP FACILITIES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN 48 HOURS FOLLOWING A STORM EVENT.
9. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO DOWNSTREAM SYSTEM.
10. ANY PERMANENT RETENTION/DETENTION FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE PERMANENT FACILITY IS TO FUNCTION ULTIMATELY AS AN INFILTRATION OR DISPERSION SYSTEM, THE FACILITY SHALL NOT BE USED AS A TEMPORARY SETTLING BASIN. NO UNDERGROUND DETENTION TANKS OR VAULTS SHALL BE USED AS A TEMPORARY SETTLING BASIN.
11. IF NECESSARY FOR SEDIMENT CONTROL, THE CONTRACTOR SHALL DESIGN AND CONSTRUCT SEDIMENT TRAPS AS REQUIRED BY AND IN ACCORDANCE WITH THE PROJECT MANAGER'S SPECIFICATIONS.

| REVISIONS NO. | DESCRIPTION | BY | CHK. | APPRVD | DATE |
|---|---|---|---|---|---|
| | | | | | |

**FINAL DESIGN FOR CONSTRUCTION**

ENGINEER

PREPARED BY:
Brown AND Caldwell
3264 GONI ROAD, SUITE 153
CARSON CITY, NEVADA 89706
PHONE: (775) 883-4118

| | | |
|---|---|---|
| DESIGNED | RDH | 5/10 |
| DRAWN | RDH | 5/10 |
| CHECKED | RAM | 5/10 |
| APPROVED | RAM | 5/10 |
| APPROVED | | |
| APPROVED | | |

PREPARED FOR:
Atlantic Richfield Company

REMOVAL ACTION IMPLEMENTATION PLAN FOR THUMB POND AND SUB-AREA A

TITLE
**CIVIL**

**TYPICAL BMP's**

SCALE AS SHOWN — LINE IS 4 INCHES AT FULL SIZE (IF NOT, SCALE ACCORDINGLY)

DRAWING NUMBER: **138555-C-400**

SHEET NUMBER: **27 OF 27**

REVISION

Path: P:\Arco-Yerington\Evaporation Pond-Sulfide Tailings\136742 - Year 2009 Files\CAD\C3D\Thumb Pond_Sub-Area A\100% Design\2-Sheets\C-C Filename: 138555-C-400 Plot date: Jun 16, 2010-07:04:08am CAD User: rhunt